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No. 15

Value of Pesticide Exports Set New Record in 1955

**Shipments Total
328,131,000 Lb.,
Worth \$79.1 Million**

WASHINGTON—U.S. pesticide exports in 1955 totaled 328,131,000 lb., valued at \$79,133,000, with the dollar value setting a new yearly record, according to the Business & Defense Services Administration of the U.S. Department of Commerce.

The 1955 figures compare with exports of 281,860,000 lb., valued at \$27,400,000 in 1954.

Shipments to North American countries showed a gain of 37% from 1954 to 1955, with exports to Mexico topping those to Canada for the first time. Little change occurred.

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India, Bolivia, Turkey Receive ICA Authorizations

WASHINGTON—International Cooperation Administration has issued authorizations totaling more than \$5 million to India, Turkey and Bolivia for purchase of pesticides and fertilizers.

India received a grant of \$2,166,700 to buy pesticides, which must be obtained from the U.S. or its possessions.

Contracting period for this procurement runs from date of the announcement April 4, 1956, with terminal delivery date fixed as of June 30, 1956.

Bolivia obtained a pesticide authorization of \$30,000 with procurement limited to the period of March 29, 1956, through June 30, 1956.

Authorizations to Turkey total \$1.5 million to buy both fertilizers and pesticide materials.

ICA reports that \$500,000 will be spent on nitrogenous fertilizers and \$300,000 on phosphatic fertilizers. The pesticide authorization of \$700,000 may be used only for the procurement of raw materials for manufacturing pesticides in Turkey.

In the case of all procurements, the contract date started March 28 and runs through to July 31 with a terminal delivery date of Sept. 30.

ICA also has issued an authorization to the government of Bolivia for the purchase of fertilizers to the value of \$37,200. Nitrogenous fertilizers will call for the expenditure of \$22,000, potash fertilizers \$1,200 and phosphatic fertilizers \$24,000. The contract period started on March 29 and continues to June 30 with terminal delivery date of Aug. 31, 1956.

Davison Installs New Facilities at Curtis Bay Works

BALTIMORE—New facilities for fertilizer processing have been installed at the Curtis Bay Works (Baltimore) of the Davison Chemical Co., division of W. R. Grace & Co., at a cost of \$400,000, it has been announced by W. N. Watmough, Jr., vice president.

The new facilities have added to capacity and enabled production of an improved type of granulated fertilizer, he said. Extensive reconstruction of one of the existing buildings at the plant was required to house new granulation equipment.

The process, it was explained by Mr. Watmough, is characterized by positive heat control and use of ingredients in economical solution form. These include phosphoric acid and nitrogen or urea solutions.

Mr. Watmough said that the resulting product is of graded particle size, free of dust. It does not drift, he said, and it can be applied evenly. It gives up its nutrients at a regulated rate and resists caking in storage, Mr. Watmough said.

An added advantage of the process is that it enables production of higher analysis fertilizers, Mr. Watmough said. The Davison plant offers formulas as high as 15-15-15 and supplies all formulas recommended for the Maryland area.

A. R. Worrall is manager of the Curtis Bay Works, under F. C. Nicholson, vice president, operations.

Viewpoints on Plant Food Sales Differ as Experts Look to 1956

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON, D.C.—Beset with widely varying weather conditions within the major farm areas of the nation; troubled with legislative uncertainties as Congress attempts to solve the farm problem riddle with magic potions of political expediency, it is small wonder that the best judgment of the plant food industry now regards the industry sales outlook for the coming year with differing points of view.

These opinions vary from guarded optimism, based on rather solid judgments, to fears expressed by another group who say that the

unknown influences at work now may defer sales to such a point that the basic suppliers of plant food nutrients may not be able to keep pace with farm orders coming later in the season.

Both groups agree that all components of the sales problem have conspired to retard sales bookings this season—a condition which creates uneasiness in the sales forces of the plant food industry companies.

Under a cold, critical judgment apart from internal pressures and sales pressures, it is possible to find a common denominator between these two opinion groups within the industry.

First, the less optimistic side as expressed to Croplife probably reflects a "sweating out" process by big producers whose anxiety over delayed sales may be coloring their judgment. As will be pointed out later, the less optimistic group provides some genuine basis for optimism which they now seem to ignore as they cry the "blues."

The optimists in the industry are by no means starry-eyed dreamers who see further sales increases for the agricultural chemical industry

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PLANT DISEASE, INSECT NOTES

Survival of Boll Weevils in Louisiana Hits Record High

BATON ROUGE, LA.—Boll weevils in record numbers have survived the winter months in Louisiana, according to a survey just completed by the staff of the USDA cotton insect laboratory at Tallulah. According to a report by R. C. Gaines, head of the laboratory, an average of 3,654 live weevils per acre was found in the 200 samples collected in Madison parish near Tallulah. This figure is 4.3 times the average number found during the past 20 years, and 1.7 times the previous record total set in 1950.

An average of 1,884 live weevils per acre was found in 140 samples of ground trash collected in nine other parishes, Dr. Gaines stated. Similar collections were made in five of these parishes in the spring of 1955, but this year's average of live weevils per acre was 3.6 times the average for samples collected last year in these five parishes.

The live weevil per acre average for all 340 samples was 2,925, which indicates a survival rate of about 30%, since the average of live weevils per

acre in 330 samples taken last fall was 9,621.

Trash collections in parishes other than Madison this spring were made by Dr. L. D. Newsom, head of the Louisiana State University Department of Entomology, and members of the entomology staff.

Kirby L. Cockerham, entomologist with the Louisiana State University agricultural extension service, says that although weevil damage will depend a great deal on weather conditions later in the year and on weevil control measures used by cotton growers, the large number of survivals means that weevils are ready to get off to a fast start if conditions are favorable.

Alfalfa Weevil Appears in Two Virginia Counties

BLACKSBURG, VA.—The alfalfa weevil has been found in two additional counties—Gloucester and Amelia—for the first time. Arthur P. Morris, associate entomologist at VPI, says the alfalfa weevil has been

(Continued on page 4)

Census Report Shows Growth of Sulfuric Acid Industry

WASHINGTON—The manufacturers in the sulfuric acid industry shipped products valued at \$139.3 million during 1954, according to the recently released preliminary results obtained from the 1954 census of manufactures conducted by the Bureau of the Census.

This total was an increase of 130% over the value of shipments in 1947, when the last census of manufactures was taken. Value added by manufacture in the industry during 1954 amounted to \$64.8 million, an increase of 108% over the 1947 figure.

Included in 1954 shipments was \$31 million worth of products to outside industries, including inorganic and

Kansas Firm Buys Fertilizer Plants

MCPHERSON, KANSAS — The Union Farm Supply, Inc., here has purchased the nitrogen fertilizer plants located at McPherson and Zimmerdale, Kansas.

The firm announces that fertilizer needs can now be supplied through Robert Schroeder of Newton, Kansas, and A. D. Holdeman, Moundridge, Kansas.

USDA Dairy Pasture Research Reveals High Profits from Ample Fertilizer Use; Finds Small Amounts to Be Ineffective

HUNTLEY, MONT.—Dairy farmers seeking to cut down costs of pastureland for their cows, can do so if sufficient amounts of fertilizer are used, according to studies made over the past four years at the United States Department of Agriculture Dairy Field Station here. The work indicates a definite profit advantage in fertilized permanent pastures compared with unfertilized pastures, even though the latter appear on paper to cost less.

The emphasis, however, is laid on this fact: unless fertilizer is applied in adequate quantities, the increased pasture output will not pay for the cost of the fertilizer.

In measuring the relative success of a dairyman, calculations are made first in terms of milk and butterfat production for profit. In addition, body weight must be maintained.

ARS dairy husbandmen and State cooperators at the Huntley station have applied these rules to determine the relative production and cost efficiency of various experimental pasture treatments. Another measure used is comparison of pasture value with the value of alfalfa hay.

Pasture plots averaging 0.84 acre were seeded to the "Huntley mixture," containing about 4 parts each of smooth brome seed, Kentucky bluegrass, and Alta fescue, 6 parts of orchardgrass, 2 parts of Ladino clover, 1 part of Kenland red clover.

Treatments, following seeding and growth the first year, included: (1) fertilization, and renovation by disking; (2) fertilization alone; (3) renovation alone; (4) neither fertilization nor renovation, as a check.

Each treatment was applied to six separate plots to provide sufficient feed for the cows used in each experiment. The cows were weighed as they were turned into the plots and again after each plot was completely grazed, usually in about a week. Individual milk and butterfat production records were kept for all animals. The figures thus obtained were used to compute the total digestible nutrients (TDN) obtained by each cow from each pasture plot each day.

Ability of the various plots to produce feed was judged on the basis of the daily requirements of in-

dividual cows. Feeding standards show, for example, that a 1,500-pound cow requires 11.8 lb. TDN for body-weight maintenance and 2.8 lb. to produce 10 lb. of 3% milk, or 32 lb. to produce 10 lb. 4% milk.

Renovation, a part of the study, was first applied as a practice in 1954—4 years after the work was begun. The results will be checked and repeated at 4-year intervals.

Heavy application of superphosphate (500 lb. an acre) were used when the experiment began. Nitrogen was also applied at the start and thereafter twice a year (spring and summer) in the form of ammonium nitrate. This was put on at 350 to 400 lb. an acre, and in heavier applications of up to 550.

Fertilized pastures—compared with unfertilized—produced 400 lb. more TDN in 1951, 656 more in 1952, 1,158 more in 1953, and 1,707 more in 1954. The latter represented a 44% increase over the output of the unfertilized pasture.

Only heavily-fertilized pastures out-produced the unfertilized from the viewpoint of profit over fertilizer outlay. On pasture treated the first year with 350 pounds of nitrogen per acre, the fertilizer cost \$7.50 more per acre than the pasture was worth (in terms of value equivalent to alfalfa hay). Second-year pasture production was worth \$2.50 less than the cost of 400 lb. fertilizer an acre. The third year, with 550 lb. an acre, pasture value exceeded fertilizer cost by \$5.03. And in the fourth year, fertilized at the same rate, the pasture was worth \$19.73 above fertilizer.

Aside from fertilization results, these studies have also shown the advantage of various practices designed to reduce damage to pasture and extend its usefulness. Huntley researchers subdivide experimental plots by movable electric fences. These confine the cattle to small areas and prevent trampling and contamination of unused portions. The fences are moved each day or two to keep fresh grass always available.

After cattle graze 6 to 8 days, each plot is clipped so that the pasture growth is uniform. This is followed by a light harrowing to break up and distribute droppings. Such practices, following grazing, are important to good pasture management.



Dr. Robert G. Howe

Dow Chemical Co. Appoints Two Field Specialists

MIDLAND, MICH.—Dow Chemical Co. has announced the appointment of Dr. Robert G. Howe and Dr. Mark G. Wiltse as field specialists for the development of agricultural chemicals.

Dr. Howe, who will work out of Dow's home office in Midland, will be primarily connected with insecticidal and commodity and space fumigant projects in 12 states in the Midwest and Southwest.

Dr. Wiltse's new duties are primarily connected with vegetation and plant growth control projects and developing herbicides, defoliants and dessicants in a 14 state eastern area. He joins Dr. Henry Gray at Dow's Washington, D.C. office.

Much of the time of Dr. Howe and Dr. Wiltse will be devoted to research, but their services will be available, upon request, in research and development studies at state colleges, experiment stations, the U.S.

Albert E. Forster Named Board Chairman Of Hercules Powder

WILMINGTON, DEL.—Albert E. Forster has been elected chairman of the board of directors of Hercules Powder Co. to succeed Anson B. Nixon, who retired under provisions of the Hercules pension plan. Mr. Nixon will remain as a member of the board of directors at the request of Hercules' board.

The action was taken at the annual meeting of Hercules' board of directors at which Mr. Forster was reelected president of the company as well as being elected board chairman. All other officers of Hercules Powder Co. were reelected for the ensuing year.

Reelected vice presidents were Dr. Wyly M. Billing, John J. B. Fulenwider, John B. Johnson, John R. L. Johnson, Jr., Edward B. Morrow and Philip B. Stull.

J. H. T. McConnell was reelected secretary; John E. Goodman, treasurer; and George B. Baylis, Leslie W. Mason, Arthur L. Perry, Paul J. Weber, assistant treasurers.

Members of the executive committee reelected were Mr. Forster, chairman; Dr. Billing, Mr. Fulenwider, J. B. Johnson, J. R. L. Johnson, Jr., Mr. Morrow and Mr. Stull.

PASTURE TOUR

BLACKSBURG, VA.—The use of pasture and forage crops in a grazing and winter feeding program will be observed on several types of farms during the Eastern Virginia Regional Pasture Tour to be held April 11-12.



Dr. Mark G. Wiltse

Department of Agriculture and other organizations, the firm stated.

Dr. Howe will focus his activities in Texas, New Mexico, Oklahoma, Colorado, Kansas, Missouri, Iowa, Minnesota, Wisconsin, North Dakota, South Dakota and Nebraska.

He is a native of Ontario, Canada, and received a B.S.A. degree from Ontario Agricultural College at Guelph. His graduate studies were carried on at Cornell University where he received his Ph.D. in entomology in 1955.

Dr. Howe, who joined The Dow Chemical Co. in July of last year, has assisted in field research with agricultural chemicals at Dow laboratories in South Haven, Mich. In addition he served at Dow's agricultural research laboratories in Seal Beach, Cal., working on structural fumigation for termite control.

Dr. Wiltse will focus his activities in North Carolina, Virginia, West Virginia, Pennsylvania, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine.

He is a native of Michigan and received his B.S., M.S. and Ph.D. degrees from Michigan State University. His doctorate, which he obtained in 1955, came in the field of plant physiology.

Dr. Wiltse has been with The Dow Chemical Co. since May, 1955, and has assisted in field research with agricultural chemicals at Dow laboratories in South Haven, Mich.

Fairfield Chemical Opens Atlanta Office, Warehouse

BALTIMORE — The Fairfield Chemical Division of the Food Machinery and Chemical Corp., Baltimore, has announced the opening of an Atlanta office plus warehouse facilities.

This office will be under the direction of Robert B. Henderson and will serve North Carolina, South Carolina, Georgia, Alabama and Florida. The office will be located in the Candler Bldg., 127 Peachtree St. N.E., Atlanta 3, and the temporary telephone numbers are Alpine 6558 and 6576.

Mr. Henderson is a graduate of the University of Georgia from which he obtained his degree in master of science in agriculture. For the past several years he has worked on special technical sales and field development assignments for Fairfield throughout the southeastern area.

MISSOURI MEETING

ST. LOUIS—William R. Farrell, director of advertising, Monsanto Chemical Co., will be the principal speaker at an April 11 meeting of the Associated Drug & Chemical Industries of Missouri at Hotel Chase here.



SOUTHWESTERN BRANCH OFFICERS—At its annual meeting at Ft. Worth, Texas, Feb. 20-21, the Southwestern Branch of the Entomological Society of America named new officers for one year terms. Shown above, left to right, are P. J. Reno, Hercules Powder Co., Dallas, Texas, named to represent the branch on the National Governing Board; R. C. Bushland, Kerrville, Texas, executive committee of the branch; J. C. Gaines, Division of Entomology, Texas A&M College, College Station, Texas, branch chairman; Sherman W. Clark, Texas Gulf Sulphur Co., Houston, secretary; and Harvey L. Chada, Denton, Texas, vice chairman. In assuming his new position as chairman, Dr. Gaines succeeds Douglas Earley, Los Fresnos, Texas.



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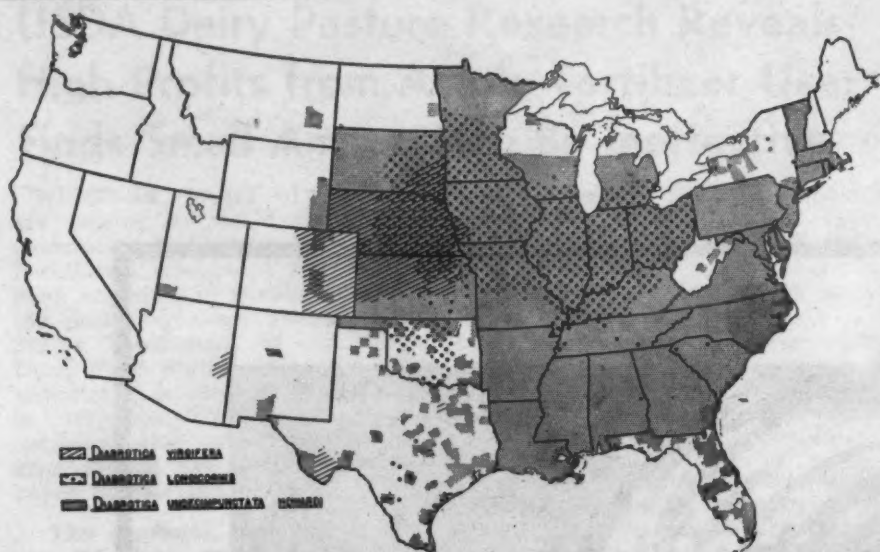
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CORN ROOTWORM DISTRIBUTION—Distribution of three species of corn rootworms is indicated in the above U.S. Department of Agriculture map compiled from state reports received up to April 1, 1956, and from records of the Agricultural Research Service. The map was prepared by the Economic Insect Survey Section, Plant Pest Control Branch of ARS. The three species of rootworms, *diabrotica virgifera*, *diabrotica longicornis*, and *diabrotica undecimpunctata* (Howard) are shown by shaded areas.

INSECT AND PLANT DISEASE NOTES

— Continued From Page 1 —

troublesome in Virginia since 1952, and prior to the last reports was known to be in 64 counties.

The larvae of the alfalfa weevil are similar to that of the clover leaf weevil, known throughout the state but which rarely necessitates the use of insecticides. Chemical control of the alfalfa weevil is, on the other hand, often needed. "It will be to the advantage of farmers and professional agricultural workers if they learn to tell the two apart," Mr. Morris says.

Pea aphids are light on alfalfa in all parts of Virginia, but to date there are no signs that insecticides are needed.

Eastern tent caterpillars are hatching. They are not easy to spot on trees this time of year, but a close look will reveal many colonies which

can be controlled now before the webs become well-developed. They have a wide variety of host plants with wild cherry and apple trees at the top of the preferred list.

Blue Mold Found in Tobacco Field

CLEMSON, S.C.—Three small instances of blue mold of tobacco have been found in Columbus County, North Carolina, near the South Carolina border. The blue mold was restricted to three spots, each about foot in diameter. The mold was first observed in the middle of March.

Boll weevil survival in South Carolina is higher than it was last year. In Florence county, 200 square yards of surface woods trash examined from 20 farms in March, showed live boll weevils ranging in numbers from 484 to 16,456 per acre, with an average of 4,646 per acre.

Survival this spring is about 1 times the average number found over a 19-year period and over twice the number found in the spring of 1955.

Georgia Warned About Black Turpentine Beetle

ATHENS, GA. — Warnings about the possibility of outbreaks of black turpentine beetle have been issued by C. Dorsey Dyer, extension forester and C. R. Jordan, extension entomologist of the agricultural extension service.

They point out that this pest caused considerable damage to pines in the state during the late summer and fall of 1954, and that as the weather warms up this spring, an alert watch should be kept.

It is explained that the black turpentine beetle's first attacks are almost always made within the base 18 inches of the tree. These first attacks are seldom numerous, usually less than a half dozen. The attacks are characterized by masses of pitch which appear on the bark surface at the base of the tree. Though the pitch may sometimes be fluid and run down the bark, it is usually quite solid and sticks out from the bark surface.

These first few attacks, by themselves, do not kill the tree. The light attacks, the beetle's long life history, and its relative inactivity make it much easier to control than other bark beetles, it is pointed out.

When the beetle is first active in a stand, it is confined to a small number of trees, but by the end of the season the beetle may be in 10 to 15% of the trees. During any period the attacks is an area are large concentrated on those trees which had been attacked in previous months.

Trees recently injured by fire, logging, wind, etc., are susceptible to beetle attacks, as are turpentine trees, especially those with vertical faces installed with a broad axe. Intensively turpented trees growing in dense stands are also more liable to attack.

Florida Armyworms Found on the March

GAINESVILLE, FLA. — Armyworms in the larval stage, averaging 2 per linear ft. of row, were found on sugar cane in Indian River County. The insects were located underground but they had been feeding on foliage above ground, doing a considerable amount of damage.

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Cotton Program Means Extra Cash To Texas Farmers

COLLEGE STATION, TEXAS—Ten years ago the Texas A&M Extension Service's 7-Step Cotton Program was initiated. Through this program effort which brought together all segments of the cotton industry great improvements have been made by Texas cotton producers.

Fred C. Elliott, extension cotton specialist, points out in his annual report the extent and value of the program to Texas. Acre yields for the 1946-55 ten year period are 40 lb. an acre higher than for the 1936-45 period. The 1955 acre yield of 282 lb. is the highest since 1866.

Improved varieties, better insect control programs, increased use of machinery, better harvesting methods, improved and cheaper cultural methods, improved rotation systems and soil building crops and improved marketing, all part of the 7-step program, are credited by the specialist for the increased yield.

Mr. Elliott reports that naphthalene for spot-oiling Johnsongrass were used on 73,637 acres in 104 counties. Aerial oiling with herbicidal naphthalene was done on 14,617 acres in 41 counties. Mr. Elliott says that many farmers reported 100 percent satisfaction with this practice.

Defoliation of cotton for better machine harvesting was practiced on a much wider scale than ever before. The saving on machine harvesting, a third of last year's crop, was estimated at \$20 a bale or \$33.7 million.

Based on 10 years of cotton improvement experience and data from experiment station variety testing, Mr. Elliott and other cotton industry leaders figure that 40 pounds of the 55 state average of 282 lb. of lint an acre is due to the cumulative effect of the work done by Texas A&M College System personnel on the 7-step cotton program. This extra 40 lb. from each of the 6,860,000 acres harvested in 1955, figured at the average price of 33¢ lb., brought to Texas growers \$90.5 million.

How do farmers get the information that has enabled them to make these improvements? Mr. Elliott says the extension specialist team, composed of the cotton specialist, an entomologist, cotton gin specialist and at times other specialists, participated in 116 meetings attended by 14,393 persons last year. In addition, county agents held 1,454 county and community meetings and tours on cotton improvement with an attendance of 7,140 persons. County agents also prepared 1,154 timely news stories on cotton and appeared on 884 radio and television programs.

The specialists and county agents have and received cooperation from other groups, organizations and agencies working for the betterment of the cotton industry in the state. The 7-step county cotton committees were the clearing houses for these efforts.

GOLF OUTINGS

NEW YORK — The Salesmen's Union of the American Chemical Industry has lined up a schedule of golf outings for the 1956 season, which has been announced by Stewart Howell, chairman of the SAACI golf committee. The association's golf calendar is as follows: May 17, Huntington Crescent Club, Huntington, L. I., N. Y.; June 19, Bonnie Briar Country Club, Larchmont, N. Y.; July 19, Lickhocker Country Club, Tena, N. J.; Aug. 16, Tamarack Country Club, Greenwich, Conn., and Sept. 11, Hackensack Country Club, Hackensack, N. J. The Connecticut outing in August will combine a day of golf with an outdoor clambake.

Forester Outlines Use of Chemicals To Kill Unwanted Trees

ATLANTA—Southern pine forests can be freed of hardwood competition with less effort and at a lower cost through the use of chemicals.

That was the opinion issued by an Agricultural Extension Service forester as more and more timber owners seek ways to eliminate the useless trees.

Nelson Brightwell, University of Georgia, said the use of chemicals such as 2,4-D and 2,4,5-T can be used successfully to rid the forests of "weed trees."

The use of these chemicals gives more rapid top kill, prevents sprouting, and effectively kills trees which cannot be killed by girdling or cutting alone, he said.

Recommendations for proper use

appear on the chemical containers and woods owners should follow the instructions, he explained.

Mr. Brightwell said a common method for controlling hardwoods is to apply the chemical solution to the base of the tree. It is best adapted for use on trees and sprouts to four inches in diameter, he continued.

The forester said this method requires mixing one gallon of 2,4,5-T with 25 gallons of oil. "The mixture is applied to the lower 12 inches of each stem to be killed," he said. "Care must be taken to wet all sides of the plant, and be sure there is considerable 'run down' to the ground line. If the root crown is not completely covered with the chemical mixture, resprouting may follow."

Timber owners have found that one gallon of the spray solution will treat approximately 150 one-inch trees, 75 two-inch, 50 three-inch, or 35 four-inch. Mr. Brightwell pointed out that the amount will vary with the kinds of trees. "Thick, corky-barked trees,"

he explained, "require more solution than those with smooth bark."

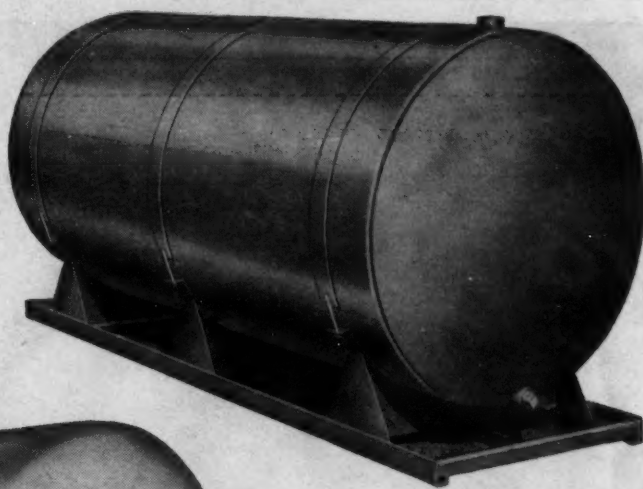
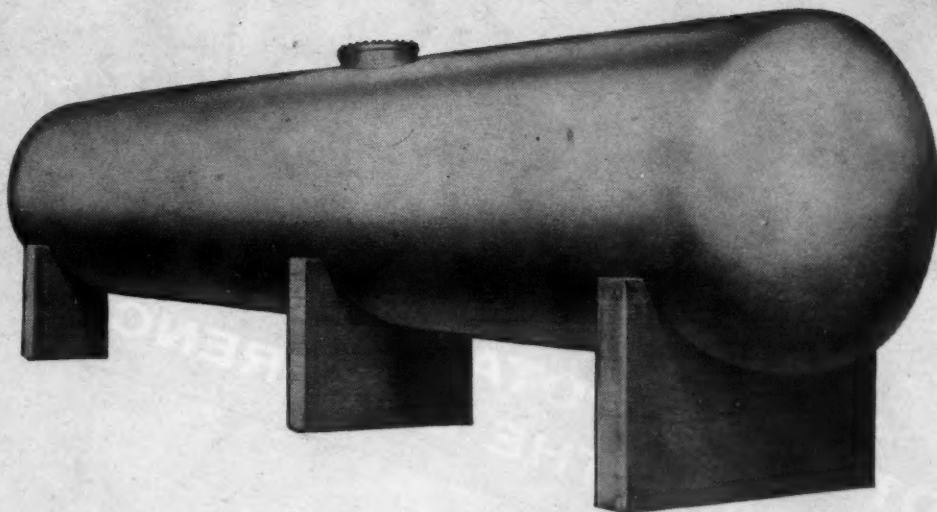
For killing trees larger than four inches in diameter, Mr. Brightwell recommended the "frill" method. This calls for making a continuous frill around the tree, usually about waist high or lower, with an ax or hatchet. The chips are left to form a trough for holding the chemical solution.

"For frilling," the Extension forester continued, "mix one gallon of 2,4,5-T with 25 gallons of water. Pour as much of the solution into the cut as you can without wasting it. Under most conditions one gallon will treat approximately 48 five-inch trees, 24 10-inch or 15 12-inch."

JOHNSON GRASS CURB

LOUISVILLE—Both houses of the Kentucky General Assembly have voted approval of a bill under which the State Highway Dept. would be called on to eradicate Johnson grass from highway rights of way.

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Spotted Alfalfa Aphid Poses Severe Threat to 1956 Crop

KANSAS CITY—A new insect—the spotted alfalfa aphid—is posing a serious threat to the 1956 alfalfa crop, according to reports from the alfalfa dehydrating industry.

Early season reports received by Joseph Chrisman, executive vice president of the American Dehydrators Assn., Kansas City, indicate heavy infestations, exceeding last year, in the early maturing areas of Texas and Oklahoma. A similar pattern may develop in Kansas and southern Nebraska.

"The aphid is taking up this spring where it left off last fall," Mr. Chrisman said. "No one can foretell accurately how much damage will result, but the pest certainly is getting a faster start than a year ago."

"If spring weather is dry and if farmers do not take active control

measures, a serious reduction in alfalfa production could result," Mr. Chrisman said.

"The alfalfa dehydrating industry in the Middle West is keeping its fingers crossed this spring. If weather conditions are conducive and control efforts spring leaks, we could have a production disaster."

Kansas Farm Supply Firm Has Grand Opening

ST. FRANCIS, KANSAS—K. D. Crumly has announced the opening of the new St. Francis Mill and Seed Co., with a complete fertilizer department. Grand opening was held March 31.

The new establishment replaces the original mill which was totally destroyed by fire Aug. 12, 1955. Services offered, besides fertilizer, include the mixing of feeds, steam rolling, complete seed department and grain storage.

TVA Assigns Two To Field Positions

KNOXVILLE — Two members of the TVA's fertilizer distribution branch have been assigned to field posts, TVA announced recently. L. Page Johnson is headquartered at Little Rock, Ark., and John E. Wiley is located at St. Paul, Minn.

The two staff members will work with distributors and mixers and will conduct a fertilizer educational program with local dealers, TVA said. Mr. Johnson's territory will be Arkansas, Kansas, Louisiana, Nebraska, Oklahoma and Texas. Mr. Wiley's area will consist of Minnesota, North Dakota, South Dakota and Wisconsin.

SOIL SCIENTIST DIES

BERKELEY, CAL. — Dr. Edward A. Colman, a soil scientist with the U.S. Forest Service, died here recently at the age of 45.



Larry E. Franks, Jr.

Larry E. Franks, Jr. Joins Hayes-Sammons

MISSION, TEXAS — The Hayes-Sammons Co., manufacturers of Mission Brand Agricultural chemicals, has announced the appointment of Larry E. Franks, Jr., to its staff. Mr. Franks was formerly the agricultural agent for Willacy County. 4-H Club boys trained by him have won first place in either the dryland or irrigated divisions of the Valley Fair Bureau cotton contest each year for the last four years. Willacy County 4-H Clubbers have also taken top honors in the fat calf division of the Rio Grande Valley Livestock show for the past four years.

Mr. Franks is a veteran of World War II and spent four years in the navy. He is a graduate of Texas A&M and has worked for the Texas Extension Service for nine years. He will work with growers throughout Willacy County as well as the central portion of the lower Valley from Weslaco to La Feria. He and his wife, Viola, their son, Ricky, and daughter, Laura Leigh, will continue to make their home in Raymondville.

Kentucky Fertilizer Sales in 1955

Total 519,143 Tons

LEXINGTON, KY. — Fertilizer sales in Kentucky during 1955 totaled 519,143 tons, according to the state Department of Feed and Fertilizer. The total included 415,916 tons of mixed goods and 103,227 tons of materials.

Sales totaled 431,024 tons during the first half of the year and 88,119 tons during the last half.

Most popular mixed grades were 5-10-15, 71,110 tons; 4-12-8, 63,883 tons; 3-12-12, 59,723 tons; 6-8-6, 58,883 tons, and 2-12-6, 31,524 tons.

Sales of materials during the year included 24,069 tons of ammonium nitrate, 29,310 tons of superphosphate 18-20% available, 10,224 tons of muriate of potash and 6,934 tons of sulfate of potash.

Fertilizer sales during January of this year totaled 55,413 tons, compared with 32,920 tons during the same month a year ago. January 1956 mixed goods sales totaled 48,119 tons, compared with 23,267 tons in January, 1955.

Magnet Alloy Plant

NEW YORK—W. R. Grace & Co. of New York has announced a decision to undertake a joint million-dollar investment in Brazil with Eriez S. A. Produtos Metalurgicos, wholly-owned subsidiary of Eriez International Co., Erie, Pa., to manufacture permanent magnet alloys. The plans call for construction of a new plant in the Sao Paulo area at a total investment of over \$1 million.

with sufficient potash

IN SWEET POTATOES, POTASH-ENRICHED FERTILIZERS MAKE THE DIFFERENCE

without sufficient potash

Using balanced fertilizers farmers are able to improve nutrition-poor soils and produce healthy, vigorous, and profitable crops. Potash is an essential partner in a balanced fertilizer, building crop resistance to disease, improving the quality of the crop, and increasing yield.

U.S.P.'s high-grade muriate of potash has the highest K₂O content and is free-flowing and non-caking—important advantages in the man-

ufacture of these modern fertilizers which help American farmers to better crops and better incomes.



REG. U.S. PAT. OFF.

HIGRADE MURIATE OF POTASH 62/63% K₂O
GRANULAR MURIATE OF POTASH 60% K₂O MIN.

UNITED STATES
POTASH COMPANY
INCORPORATED

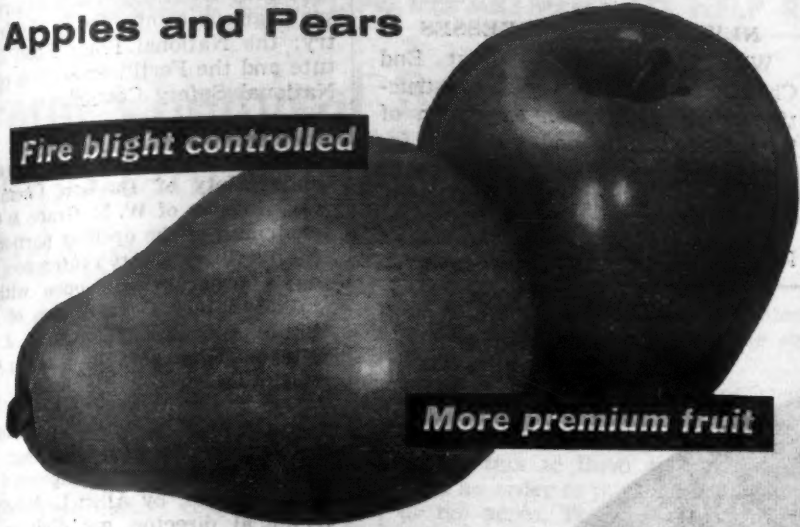
30 Rockefeller Plaza,
New York 20, N.Y.
Southern Sales Office
Rhodes-Haverty Building,
Atlanta, Georgia



NEW ANTIBIOTIC SPRAY GIVES 2-WAY CROP PROTECTION, 2-WAY BENEFITS

Apples and Pears

Fire blight controlled

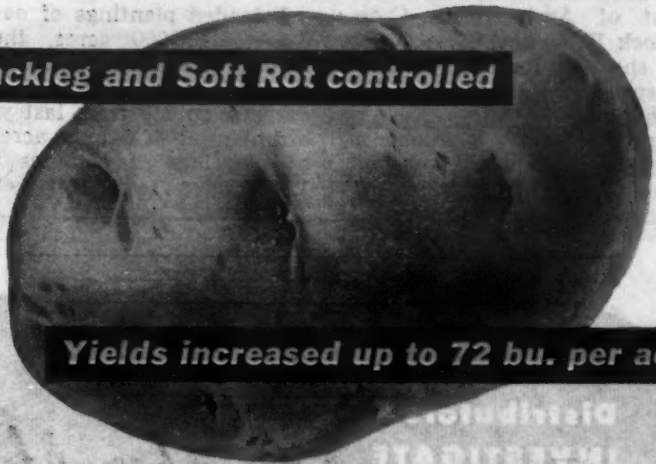


More premium fruit

(Spray trees every 3 to 5 days during blossom time. 50 ppm for apples, 30 ppm for pears)

Potatoes

Blackleg and Soft Rot controlled



Yields increased up to 72 bu. per acre

(Soak cut seed pieces in 100 ppm solution for approximately 1 minute)

Tobacco

Wildfire and Blue Mold controlled



Heavier, better-rooted transplants

(Start spray when plants are about the size of a dime. Spray seedbeds with 100 ppm solution weekly)

Tomatoes and Peppers

Bacterial Spot controlled



Up to 50% increase in yield

(Start sprays when first true leaves appear in seedbed. Spray plants with 200-ppm solution every 5 days until fruit is formed)

Agri-mycin*

CONTROLS DISEASE INCREASES YIELDS



Pfizer

These results, from controlled experiment station tests with cooperating growers, show how the extra yield at harvest time can pay many times over the small cost of protecting plantings against destructive outbreaks of bacterial plant diseases this spring.

The bigger yield from Agri-mycin-treated plots is also of better quality. Larger fruit, with far less spotting, scarring or cracking brings a higher price per pound or per bushel.

Write for further information. Just tell us what crop or crops you are interested in.

Chas. Pfizer & Co., Inc.
Dept. C4-9
Brooklyn 6, N. Y.

Agri-mycin is the *only* antibiotic plant spray containing both streptomycin and Terramycin®. The Terramycin serves a three-fold purpose. Through synergistic action it actually increases the effectiveness of the streptomycin. It promotes healthy, vigorous plants, thereby increasing yield. It gives orchards and plantings more lasting protection against disease by retarding development of resistant strains of the causative organisms.

Agri-mycin is now available from regular suppliers of agricultural spray materials in 9.34 oz. jars which make up to 380 gallons of spray. Economy size 25 lb. drums save the large orchardist or grower 20%. A popular priced small 2.4 oz. jar is also available for tobacco growers' seedbed protection.

*Pat. pending

©Terramycin Brand of Oxytetracycline

Chas. Pfizer & Co., Inc.
Dept. C4-9, Brooklyn 6, N. Y.

Please rush me full information on Agri-mycin and name of distributor in my area.

Name _____

Address _____

City _____

State _____

Major crops interested in _____

Oregon Farmers Plan Bigger Acreage of Spring-Sown Crops

PORTLAND, ORE.—Oregon farmers who have passed through one of the roughest winters in years, observed the start of spring by tightening up their belts and preparing to plant a larger acreage of spring-sown crops than last year.

The Portland office of the U. S. Department of Agriculture's Crop and Livestock Reporting Service explains the sharpest increase is indicated for spring wheat, followed by oats and barley.

Oregon producers are planning a somewhat smaller over-all acreage of potatoes, about the same amount of

field corn and a slight sugar beet acreage increase.

Growers expect to plant 190,000 acres of spring wheat, 35% above last year and the largest acreage since 1953. The state's total 1956 wheat acreage is now indicated to be unchanged from last season.

USDA explains that much of the spring planted grain crops increase is necessary reseeding of western Oregon land on which fall seeded crops froze out.

Intended plantings of oats are up 8% to 484,000 acres, the largest acreage planted since 1950. The prospective barley plantings of 626,000 acres is up 2% from last year's record planting of 641,000 acres. Intended plantings of potatoes are down 1,000 acres from last year, sugar

beets up slightly and field corn unchanged from 1955.

A larger acreage cut for hay is in prospect this year. If present plans are carried out the acreage of all hay harvested will total 1,060,000 acres, 2% above last year. Oregon hay supplies were reduced to low levels by the long 1955-56 feeding period.

NEW PLANT PROGRESSES

WESTEND, CAL. — West End Chemical Co. reports that construction is progressing on expansion of its sodium sulfate and salt cake facilities at its plant here. Anticipated capacity will be approximately double their present 50,000 tons for these products by January 1, 1957.

May Program Announced For Fertilizer Safety Meeting in Baltimore

BALTIMORE—A full day's program will be devoted to fertilizer industry safety considerations at the Governor's Safety and Health Conference at the Lord Baltimore Hotel here May 10-11. Speakers will represent various companies in the industry; the National Plant Food Institute and the Fertilizer Section of the National Safety Council.

According to A. B. Pettit, administrator of Industrial Health and Safety of Davison Chemical Co., division of W. R. Grace & Co., chairman of the opening portion of the fertilizer safety conference, the day's program will open with a talk, "Safety Organization of the Small Chemical Plant," by J. M. Nichols, manager, the Glidden Co., Baltimore.

Other talks to be delivered during the day include the following:

"Safe Handling of Compressed Gases in Cylinders," by Allen L. Mossman, technical director, gas division, Matheson Co., Inc., E. Rutherford, N. J.; "Safety in Our Times," by P. T. Truitt, executive vice president, National Plant Food Institute, Washington, D. C.; "Planning for Safety," by Curtis A. Cox, assistant manufacturing dept., fertilizer division, Virginia-Carolina Chemical Corp., Richmond, Va., and general chairman, Fertilizer Section, NFI; and "Flash Fires in Fertilizer Mills," by E. C. Perrine, technical service engineer, fertilizer manufacturing Nitrogen Division, Allied Chemical Dye Corp., New York.

A panel on accident case histories will be presented as the final event of the day. F. Wayne Higginson, manager of operations, the Bausch Chemical Co., Baltimore, will be moderator. Discussion leaders include R. G. Diserens, safety director, Phillips Chemical Co., Bartlesville, Okla.; J. E. Reynolds, operations manager, mixed fertilizer dept., Davison Chemical Co., division of W. R. Grace & Co., Baltimore; John S. Roszel, manager, employee relations, Olin Mathieson Chemical Corp., Baltimore, and John E. Smith, safety director, Spencer Chemical Co., Pittsburg, Kansas.

George F. Dietz, safety director, Fertilizer Manufacturing Cooperative, Inc., Baltimore, will be chairman for the afternoon session.

Greater Strawberry Production Urged

POCAHONTAS, ARK. — Greater strawberry production in the Pocahontas vicinity of the Black River Delta here is being encouraged by the Pocahontas Chamber of Commerce.

The black sandy-loam soil at the river bottoms and the foothills are ideally suited for strawberry production, officials said.

The Chamber of Commerce voted to underwrite the cost up to \$200 for grading and promoting crop produced in this area this spring. It was pointed out that communities recently have started strawberry production as a "side crop" for farmers.

In the Monette vicinity, strawberry crop this year will be nearly \$400,000 unless the crop suffers damages from the weather.

ALFALFA FIELD DAY

CORVALLIS, ORE.—A tour of alfalfa fields in the Willamette Valley ending with an alfalfa field day at the Oregon State College experimental station, has been scheduled for 8-9, according to Rex Warren, Oregon State College farm crops specialist.

Dealers —
Distributors —
INVESTIGATE

DB Granular

WEED KILLER

It's a Money Maker for you!

Here's a weed killer every farmer will want! Be ready for the demand! Now you can offer 2,4-D made doubly effective, longer-lasting, because fortified with borates. DB Granular is always ready to use... anytime, anywhere... for it is applied DRY! It does *not* need to be mixed with water and applied as a spray. "DB" is powerful! As little as 1 lb. per 100 sq. ft. is effective. Watch for "DB" farm paper advertising in your area.

SERVICE BULLETINS, FOLDERS, AD MATS FOR YOU

Be prepared to answer questions about DB Granular. Get your supply of promotional literature at once for new business. Let customers know you've got a supply of this latest herbicide... and start selling!

SPECIAL NEW SPREADER FOR "DB," NOW AVAILABLE

The PCB Spreader was designed for most efficient applying "DB" at the very low rates prescribed; is also suitable for seeding. Adjustable to rates as low as 1/2 lb. per 100 sq. ft. Weighs a mere 6 lbs. Holds 25 lbs. of "DB." Retail at only \$10.75.

APPLIES DRY...
NOTHING TO MIX...
NO WATER TO HAUL...

CHECK THESE FEATURES:

- DEPENDABLE IN ACTION
- ECONOMICAL... CONVENIENT
- READY TO USE... DRY!
- SAFE... NONFLAMMABLE
- NONPOISONOUS when used as directed
- STANDARD PACKAGE—50 lbs.

CONTROLS THESE PERENNIALS:

CANADA THISTLE • LEAFY SPURGE
TOADFLAX • RUSSIAN KNAWEED
WHITETOP • BINDWEED (Morning Glory)
and many other perennial or annual herbaceous weeds on non-cropped agricultural land.

Contains 2,4-D
yet it is
applied
DRY!

DESTROYS DEEPEST ROOTS



DB

GRANULAR

INQUIRIES
INVITED

CONCENTRATED BORASCU®
POLYBOR®-CHLORATE
UREABOR®
*Trade-mark of B.C.I.

FERTILIZER BORATES
POLYBOR®-2
RASORITE® Anhydrous
*Trade-mark of B.C.I.

AGRICULTURAL SALES DIVISION
PACIFIC COAST BORAX CO.
DIVISION OF BORAX CONSOLIDATED, LIMITED
630 SO. SNAYTO PLACE • LOS ANGELES 5, CALIFORNIA
MANUFACTURERS OF FAMOUS "20 MULE TEAM" PACKAGE PRODUCTS

CONVENIENTLY LOCATED WAREHOUSE DISTRIBUTION STOCKS FOR DEALERS

Better Selling

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

Farm Chemical Business Too Important to Be Just Another Sideline, Texas Dealer Says

By JESS BLAIR
Croplife Special Writer

The Brownfield (Texas) Farm Chemical Co. began business a little more than three years ago with a theory that chemicals for agriculture were too important to be just a sideline. That theory, coupled with a philosophy of going all-out in giving service to the customer, has helped the firm grow into one of the most alert and successful retailers in the Southwest.

The company was started by business man Murphy May and Thurman Skains, ex-farm boy and bank clerk. Mr. Skains was chosen as active manager.

The first year they were buying equipment, advertising the business and working on a shoestring basis. They ended the year in the red. Next year they enlarged the plant but still only broke even. Last year they made a profit, and increased business so much they established a branch store at Denver City, Texas, forty miles to the west.

"The main reason for our progress," Mr. Skains said, "is that we not only sell fertilizer, but we also apply it for the farmer at small cost. Many farmers don't know what they want and have small knowledge of what the soil needs."

"We have on hand dozens of soil analyses made of this area and have learned that phosphates are badly needed. We tell the farmer what he needs and offer to put it on his field for him. Our biggest seller is a dual application of 0-20-0 and anhydrous ammonia at the same time. We charge the grower \$1.50

an acre for applying the fertilizer, which is a lot cheaper than he can do it himself."

The first year Mr. Skains spent much time persuading farmers to try fertilizer. He would go out to their farms, talk to them and come back with an order to put fertilizer on five or ten acres. There was little profit in this, but the grower who increased his cotton from 30 to 50% with fertilizer was ready to fertilize all his crop next season. And the work was given to the Brownfield Farm Chemical Co.

The firm is located on an acre of land just outside the city limits of Brownfield. A used hangar 44 by 80 feet in size is used for storage space. A new modern office is a few yards away from the hangar.

The firm has kept abreast of all new chemicals. Mr. Skains does a lot of study and inquiry to find out what the new product will do and how it should be applied.

They own two tractors fully equipped to put out both dry and liquid fertilizer at the same time. This is put down about five inches in the soil. Also they have seven hook-on attachments which are rented to farmers who want to put on their own fertilizer.

Usually the company's tractors start work in January and are kept busy until planting time in May. Mr. Skains says most farmers with cotton acreage less than 100 acres prefer to hire the fertilizer applied.

The firm does both newspaper and radio advertising. It tries to keep the copy timely. If it is time for boll worms to start working, an announcement about this will be in the paper. Also new products are mentioned and the need for them is explained.

In addition to fertilizer, the company did a big business in insecticides last summer. By knowing the insects and how they damage plants, Mr. Skains was able to sell twice as much insecticide as the year before. Altogether they moved over \$125,000 in merchandise, and are looking forward to a big increase in 1956.

Two new farm chemicals are beginning to sell. They stocked a new cotton defoliant and plant drier a few weeks ago and have sold large quantities of it. Also weed killers are gaining in sales volume. In handling so many chemicals, Mr. May and Mr. Skains saw an opportunity in handling specialized equipment.

"One reason we have done well," said Mr. Skains, "is that we realized the farm chemical business was growing fast in this area. It is too big to be a sideline, as many merchants think of it. We decided to devote the whole business to nothing but farm chemicals."

"Right now it seems a wise move. Business is getting better every month, as farmers realize a new type of farming is needed. By showing them how they can make more money with insecticides and fertilizers, we are making a little for ourselves."



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

The successful on-the-farm salesman should see at least 10 prospects a day, which means getting out on a country road early in the morning and staying out until late that day.

That is the suggestion of one organization which has a number of dealer outlets for farm supply products. Officials of this organization have some further thoughts about on-the-farm selling. They are:

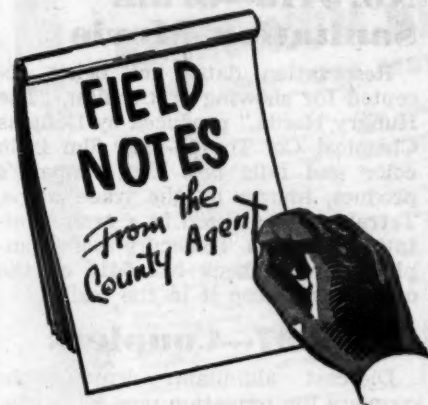
(1) Prepare a list of prospective customers on whom you plan to call. Arrange them in order so that it will conserve time and mileage expense.

(2) Prepare samples of fertilizer and other products (in plastic bags if possible) to show farmers. Take along an order book, descriptive literature and pencils to give to prospects.

(3) Be sure that all your merchandise is properly priced on your price list so that you can quickly give correct information.

(4) Be sure to ask every prospect for an order.

(5) Before leaving on a field trip, be sure you have an adequate stock of all merchandise and that you will be able to make some sort of follow-up, either in person or by mail. Your field trips will also be aided by in-store advertising and displays and by newspaper, radio and other advertising.



By RAYMOND ROSSON

County Agent, Washington County, Tenn.

A good agriculture is an insurance policy, because a prosperous agriculture is the basic requirement for full employment in industry. The reason is that agriculture provides that "extra market" necessary to absorb the output of our industrial system. This statement is confirmed by the nation's economic record for the past three decades.

Industry must depend for stability on some dependable market outside itself because it does not contain the market capacity to absorb its whole output. That of course is the same in agriculture; it has to depend upon industry and business for the consumption of its food production.

Agriculture is the purchaser of a very large per cent of all manufactured goods in the U. S. . . . that is, if it is prosperous. When purchasing power of agriculture is down, it may not show it in the market places quickly, but the buying power or the lack of it, governs millions of people living in small towns, yes, in small cities. They are dependent, for their living comes from services to agriculture, in one form or another.

Agriculture then, is the insurance policy, because it takes the surplus production of industry. Industry has to have the income to buy the food and fiber, and on the other hand agriculture has to have the cash with which to buy from industry.

A hungry man has only one want . . . food. When that is satisfied he is in position to have other wants in a flourishing economy.

Therefore the agriculture extension service and the many good dealers who serve the farmer, are trying to keep this policy in force.

Sign of the Times

The Water Association of Kern County, California, is endeavoring to raise \$30,600 for an educational and promotional program in support of a state water plan. Memberships of \$5 are being solicited.

The water shortage in Kern County, like in many other counties in California and across the U. S., is a very serious matter. Efforts to study the problem and find corrective measures are to be commended. Most areas, however, are not facing the shortage in such a realistic manner as is California.

Field Day Scheduled

In California May 9

BERKELEY, CAL. — Brush removal, reseeding and fertilizing rangelands, sheep adaptation, fat-lamb production and deer-sheep competition will be covered May 9 when Hopland Field Day is held at the University of California's range research station in Mendocino County.

University researchers from the departments of irrigation and animal husbandry at Davis will also report on their three years' studies of water run-off and erosion, forage production and animal management on two watersheds at Hopland. The watershed areas are two unimproved ranges. A lamb barbecue lunch is also planned.

WEEVIL CONTROL

LOGAN, UTAH—A good program of alfalfa weevil control, applied generally over Utah, could easily mean an extra \$600,000 worth of high quality first and second crop hay this season, according to Utah State Agricultural College.

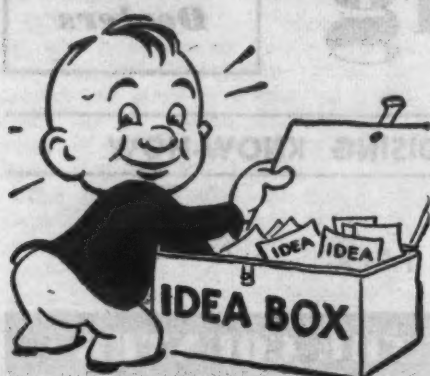


SOUTHWEST DEALER — Thurman Skains, co-owner and manager of the Brownfield Farm Chemical Co., is shown above standing inside the converted hangar which is used for storage of fertilizer and other chemicals.

Better Selling

Richer Sales Fields for Dealers

CROPLIFE, April 9, 1956



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6394—Cotton Defoliant

A product called by the trade name, Shed-A-Leaf "D", a cotton defoliant for dust application, has been announced by Chipman Chemical Company, Inc. The new product will be available in the cotton states east of and including Texas. The product is a white dust and applied by either airplane or ground dusters. It is said to be non-irritating to people handling and using it, is non-poisonous and does not corrode equipment. For further information check No. 6394 on the coupon and mail it to Croplife.

No. 6395—Phytotoxicity Bulletin

"Phytotoxicity of Solvents and Emulsifiers Used in Insecticidal Formulations" is the title of a bulletin prepared by R. T. Gast and J. D. Early for presentation at the recent North Carolina Pesticide School at Raleigh. According to Minerals and Chemical Corporation of America the information it contains "should be of interest to formulators of granular DDT for corn borer control." A company spokesman said that

"this work was not directed toward finding a suitable solvent for DDT in granular formulations, but perhaps it will be valuable to chemists and formulators in their search for a suitable solvent." The bulletin may be secured by checking No. 6395 on the coupon and dropping it in the mail.

No. 5415—Grain Sanitation Movie

Reservation dates are being accepted for showing of the film, "The Hungry Horde," produced by Douglas Chemical Co. The 18-min. film is in color and tells how the company's product, known by the trade name, Tetrakote, is utilized in a grain sanitation program. To secure more complete details check No. 5415 on the coupon and drop it in the mail.

No. 6397—Couplers

Die-cast aluminum demountable couplers for irrigation pipe with new design features are available from the Olin Mathieson Chemical Corp. Providing the same twist-locking feature of the coupler introduced in 1948, the die-cast unit is a simple two-piece construction, assembled with four bolts and nuts. A continuous one-

piece rubber gasket with a faultless seal for both low and high pressure systems is used. The gasket is a water-tight interlining and is sand-proof. Protection against grass and mud is provided by the coupler's streamlined wider foot, which also guides the tubing, the company announcement states. It is available in sizes 2 through 8-in., with or without a riser outlet. Secure more complete details by checking No. 6397 on the coupon and mailing it.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6390—Pest Control Brochure

The Diamond Black Leaf Co. has issued a brochure covering its line of pest-control products for lawn and garden care. The eight-page catalog features two new aerosol sprays for household pest control—fly and insect spray and PFFT house and garden insect spray; two improved garden insecticides—activated 40 garden spray, and black leaf rose and flower dust; and two lawn care products—lawn weed killer and lawn insect control. Fifteen other products are also described and illustrated. Supplementary information includes a review of dealer advertising and sales promotion helps and complete price schedules. Copies of the booklet are available by checking No. 6390 on the coupon and mailing it to Croplife.

No. 6386—Antidotes Folder

A folder on antidotes for various agricultural chemicals taken accidentally has been prepared by United Chemical Co., division of United-Heckathorn. The folder is prepared so that it can be made into wallet size. One side of it is devoted to a list of "approved safety equipment," their manufacturers and distributors for products such as dusts and mists. The folder is available without charge. Check No. 6386 on the coupon, clip and mail it to Croplife and the folder will be sent to you.

No. 6396—Metering Pump

A solutions metering pump designed specifically for application of liquid fertilizer solutions by subsurface injection or for spraying on top of the soil has been developed and is being

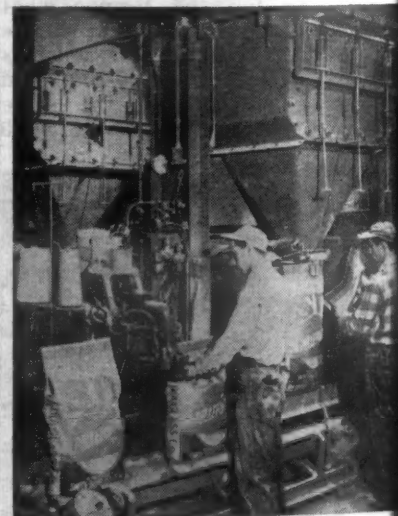
marketed by the Dempster Mill Mfg. Co. The new pump, model S, is a companion to the Liquijector anhydrous ammonia applicator pump produced by the company last year. It can be used with the firm's model S (solutions) Liquijector or similar type applicator. Simplicity in setting and operation is claimed to be a feature of the new pump in addition to its positive double-acting piston. On a Dempster applicator, the pump is said to deliver accurately within a range of from 6 to 75 gal. of liquid solutions per acre, on a swath from 80 in. to 280 in. Secure more complete details by checking No. 6396 on the coupon and mailing it to Croplife.

No. 6391—Weed Control Guide

The 1956 edition of the GLF Chemical Weed Control Guide has been released by the GLF Soil Building Service, division of the Cooperative GLF Exchange, Inc. The 62-page guide contains a list of "watch" words of weed control, and weed control recommendations for the dairyman, vegetable grower, lawn caretaker, fruit grower and diversified farming operators. Chemicals recommended to the control job are listed. A copy of the guide is available without charge by checking No. 6391 on the coupon and mailing it to Croplife.

No. 6383—Fertilizer Packer

Features of a new fertilizer packer developed by Packaging Service Bemis Bro. Bag Co., have been announced. The packer is claimed to hold consistently to weight tolerances of 4 oz. plus or minus on 50 to 100-lb. units. According to the announcement, the equipment "forms a complete packaging unit from product weighing through bag closing with production rate of 16 to 18 eighty pound bags per minute. It will handle all types of sewn open-mouth paper bags and textile bags, in size ranges of 50-, 80- and 100-lb. for paper and 100- and 200-lb. for textiles. Scales are available for fertilizers having either free-flowing or sluggish characteristics. The bag closing



ing equipment is said to be close being fully automatic. As optional equipment, the company offers newly-developed injector for insecticide treatment at the time of packing. Several installations of the packer have been in commercial operation for a number of months. Secure more complete information by checking No. 6383 on the coupon and dropping it in the mail to Croplife.

No. 6392—Soil Moisture Meter

A new model of the Irrigage meter for measuring soil moisture has been announced by the Rayturn Corp. The new model 202 incorporates a built-in selector switch, a feature which permits soil moisture observations at four different depths through a sin-

Send me information on the items marked:

- | | |
|--|---|
| <input type="checkbox"/> No. 5415—Movie | <input type="checkbox"/> No. 6392—Soil Moisture Meter |
| <input type="checkbox"/> No. 6383—Fertilizer Packer | <input type="checkbox"/> No. 6393—Literature |
| <input type="checkbox"/> No. 6386—Antidotes Folder | <input type="checkbox"/> No. 6394—Cotton Defoliant |
| <input type="checkbox"/> No. 6387—Booklet on Grasses | <input type="checkbox"/> No. 6395—Bulletin |
| <input type="checkbox"/> No. 6388—Grassland Film | <input type="checkbox"/> No. 6396—Metering Pump |
| <input type="checkbox"/> No. 6389—2,4-D Folder | <input type="checkbox"/> No. 6397—Couplers |
| <input type="checkbox"/> No. 6390—Pest Brochure | <input type="checkbox"/> No. 6398—Storage |
| <input type="checkbox"/> No. 6391—Weed Control Guide | |

NAME

COMPANY

ADDRESS

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9,
P. L. & R.)
MINNEAPOLIS,
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67,

Reader Service Dept.

Minneapolis 1, Minn.



outlet. The unit is designed for use with either of the company's two-foot tapered "Gage-Stake" or individual "Gage-Plugs." By "plugging-in" the portable meter to stakes or plugs buried in the root zone, the grower determines the soil moisture content to the best irrigation procedure. Check No. 6392 on the coupon and mail it to Croplife to secure more complete details.

No. 6389—2,4-D Folder

The Stauffer Chemical Co. has prepared a folder on the use of its 2,4-D products for weed control in crops. Listed are control recommendations for weeds in corn, sorghum, wheat, oats, barley, lawns, turf, pasture and flax. The table provided in the folder is based on the latest information available for the north central states area, the company states. Listed also are annual and perennial weeds that need one treatment and those that usually require more than one treatment. Dosages required are included. The folder may be secured without charge by checking No. 6389 on the coupon and dropping it in the mail.

No. 6398—Phosphoric Acid Storage

New vertical storage tanks in which fertilizer manufacturers can store phosphoric acid and other non-pressure corrosive liquids were recently introduced by the Butler Manufacturing Co. The tanks feature liners called by the trade name, Flex-Liners, which are air tested before shipment. Each tank is designed for the liner's easy installation and complete protection, it is claimed. Contents of 75% phosphoric acid, 80% sulphuric acid, and other types of non-pressure corrosive liquids have been stored successfully in many plants throughout the country, it is said. Information and recommendations regarding storage problems for all types of corrosive liquids will be furnished upon request. Called FXL units, this equipment is available in several sizes, including 11 ft. by 12 ft.-8,600 gal. and 11 ft. by 17 ft.-12,000 gal. capacities. However, many other capacities to suit specific needs are also available upon request. Each tank is fabricated entirely of hot rolled steel and two outlets are furnished in any combination of 2 in., 3 in. and 4 in. sizes. Secure more complete details by checking No. 6398 on the coupon and mailing it.

No. 6387—Booklet on Grasses

Phillips Petroleum Co. has issued the first of a series of booklets on pasture and range plants. The booklet, "Native Grasses—Legumes and Forbs," is a guide to the uses and favorable locations for native grasses as livestock forage, strikingly illustrated by water-color reproductions. The series is being issued as a service related to the company's agricultural demonstration project, located on the S. Adams Ranch four miles north of Foraker, Osage County, Okla., where projects involving range management, fertilizer and other agricultural petrochemicals are under study. The booklet is available free to teach-

ers and other persons interested in agriculture, as a teaching and training guide for a better understanding of pasture and range plants. The remaining sections of the series, to be published within the next 18 months, will deal with other native grasses, legumes and forbs; undesirable grasses and weeds; weeds and poisonous plants; and introduced grasses and legumes. Each plant discussed in "Native Grasses—Legumes and Forbs," is illustrated by vivid, true-to-life water-color reproductions, printed in four colors. The grasses are described in detail; their uses and value as livestock forage are discussed; and the sections of the country where they usually are found or may be grown are given. Secure the booklet by checking No. 6387 on the coupon and mailing it to this newspaper.

No. 6393—Molybdenum Literature

A new listing, with brief descriptions, of all its available chemical bulletins, has been issued by Climax Molybdenum Co. Designated Ch-3, this four-page compilation may be obtained on request. Attached to the list is an easy-to-fill-out blank for ordering desired bulletins. The company's available literature is listed in the following categories: 1. Chemical data series: This group of 13 bulletins gives comprehensive data on the physical and chemical properties of molybdenum compounds. 2. Agriculture: Fourteen publications cover research and commercial developments involving the use of molybdenum compounds in agriculture. 3. Analysis: Three bulletins review methods of analyzing for molybdenum in the chemical, metallurgical and agricultural fields. 4. Ceramics. 5. Catalysts. 6. Colors. Secure the listing by checking No. 6393 on the coupon and dropping it in the mail.

No. 6388—Grassland Film

The story of grassland farming for dairy and beef farmers is told in a new full-color, sound-slide film released by General Chemical Division, Allied Chemical & Dye Corp. The company states that "the 45-minute film gives the latest authoritative information on profitable practices in modern pasture management. Particular emphasis is placed on the new methods of fertilizing, insect and weed control, harvesting, and silage preservation that are contributing to the boom in grassland farming." Entitled "Green Pastures," the film was produced as an educational service by General Chemical and is available for showings to farm audiences by persons or groups active in agricultural education work. Check No. 6388 on the coupon and mail it for information about securing the film.

Clark Equipment Names Colorado Dealer

BATTLE CREEK, MICH.—Francis and Sims, Inc., 2855 W. 8th Ave., Denver, Colo., has been appointed to sell and service the fork-lift trucks, powered hand trucks and straddle carriers produced by the Industrial Truck Division of Clark Equipment Co., according to an announcement by L. A. DePolis, Clark general sales manager.

Marvin E. Francis is president and treasurer of the new dealership, and Harry S. Sims is vice president and secretary. Clark's former dealer in the area was John N. Meade Co.

The dealer will handle the Clark line in the entire state of Colorado, the Wyoming counties of Converse, Niobrara, Albany, Platte, Goshen, Laramie, Carbon and Natrona, and the Nebraska counties of Sioux, Dawes, Sheridan, Box Butte, Scotts Bluff, Morrill, Garden, Kimball, Cheyenne and Deuel.

ADVERTISING to help you sell more Phillips 66 AMMONIUM NITRATE

Less Work! Less Worry!
Because You Get More Profit from Fewer Acres

**PHILLIPS 66
AMMONIUM NITRATE
THE LOW COST FERTILIZER**

Lower production costs per unit always demand good farming plus proper fertilizing. Phillips 66 Ammonium Nitrate is the right nitrogen fertilizer to use with quality mixed fertilizer. Use this high nitrogen fertilizer, Phillips 66 Ammonium Nitrate, and you'll realize lower unit production costs... more profit per acre! You make more money with less work, less worry.

Other profit advantages! When you fertilize with Phillips 66 Ammonium Nitrate, you get more protein in your grain and forage for higher feed values. You have more uniform harvest dates; you lessen your farming risks. Your unused fertilizer carries over to improve your next crop, and you make the most of crop residues for maintaining soil productivity. Now is the time to order your supply of Phillips 66 Ammonium Nitrate and mixed fertilizers.

Stretch moisture, beat drought! Adequate fertilizing results in higher yields from like amounts of soil water. The nitrogen in Phillips 66 Ammonium Nitrate builds stronger roots, which seek moisture in the subsoil, thus helping to keep your soil from blowing or washing. More efficient use of moisture means you get better crops during periods of sub-normal rainfall.

**NOW AVAILABLE IN
POLYETHYLENE-LINED
80 AND 100 LB. BAGS**

**See Your Fertilizer Dealer
Today!**

PHILLIPS CHEMICAL COMPANY
A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

It's Performance That Counts!

Here's the kind of advertising Phillips is using to help you sell more Ammonium Nitrate and other fertilizers in 1956. A forceful series of ads featuring Phillips 66 Ammonium Nitrate appears in 21 leading farm magazines. They tell farmers how this high quality, high nitrogen fertilizer gives them lower unit production costs—more profits per acre—better results with less work, less worry.

Most important, these ads tell farmers that now is the time to contact **YOU** for their supply of Phillips 66 Ammonium Nitrate!

It's Performance That Counts!

PHILLIPS CHEMICAL COMPANY
A Subsidiary of Phillips Petroleum Company
BARTLESVILLE, OKLAHOMA

OFFICES IN:

AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree Street
BARTLESVILLE, OKLA.—Adams Bldg.
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney Ave.
DES MOINES, IOWA.—606 Hubbell Bldg.
HOUSTON, TEX.—1020 E. Holcombe Blvd.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South

NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—WOW Building
PASADENA, CALIF.—604 Citizens Bank Bldg.
RALEIGH, N. C.—804 St. Mary's Ave.
SALT LAKE CITY, UTAH—68 South Main
SPOKANE, WASH.—521 E. Sprague Ave.
ST. LOUIS, MO.—4251 Lindell Blvd.
TAMPA, FLA.—1214 South Dale Mabry
TULSA, OKLA.—1708 Utica Square
WICHITA, KAN.—501 KFH Building

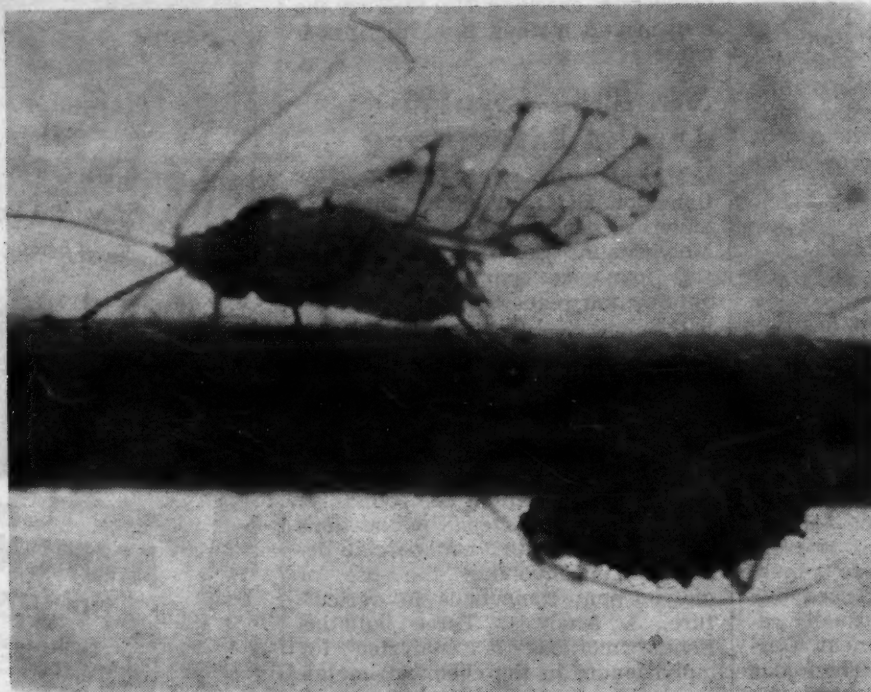


A companion high nitrogen fertilizer for mixed fertilizers. Now available in 80 and 100 lb. bags.

BUG OF THE WEEK

Mr. Dealer--Cut out this page for your bulletin board

Spotted Alfalfa Aphid



How to Identify

This important pest is a small, pale yellow or grayish insect, with from four to six conspicuous rows of dark spots on the back and with "smoky" areas along the wing veins. The illustration above, greatly enlarged, shows both the winged and wingless forms of the spotted alfalfa aphid (*Therioaphis maculata*). When first noted in 1954, it was confused with the yellow clover aphid which has been known for years as a pest of clover in the eastern states. Closer investigation disclosed the fact that the pest is the spotted aphid.

Habits of the Aphid

Peculiarly, the spotted alfalfa aphid can both lay eggs and produce living young. In northern climates, the aphid overwinters in the egg stage and in the spring these eggs hatch into females. These females can produce living young without mating. Generation after generation during the summer produces only these living young, some of which have wings which enable them to seek new food sources. Toward the fall of the year, both males and females are produced. They mate to produce eggs which overwinter and begin the cycle all over again.

Damage Done by Pest

Its rapid spread since being first reported in New Mexico in 1954, has caused authorities to consider this pest as a "threat to all alfalfa-producing areas of the U.S." It attacks the lower leaves of the alfalfa plant, feeding on the bottom

sides of these leaves. Young aphids, produced at the rate of from 2 to 5 a day, kill these lower leaves by their sucking. The pest moves up the stem to upper leaves, ruining the plant as it goes along. Its sticky secretion which coats both leaves and stems, not only acts as a medium for fungi, but reduces the quality of the hay, as well. The sticky honeydew clogs up baling machinery badly.

Control of Spotted Alfalfa Aphid

Both natural control with predators and use of insecticides have been recommended in various areas. Predators thus far have been completely unable to cope with the fast build-up and destructive propensities of the aphid. Thus the use of insecticides must provide an answer. Emphasis has been laid on both timing and application techniques for spray and dust treatments. Successful results have been had from both airplane and ground equipment. Extra care must be taken in thorough application, since the aphids congregate on the under-side of leaves. It is also emphasized that treatment of individual fields is not sufficient, since the winged forms of the pest migrate widely and reproduce rapidly. Cooperation between growers in an area is desired so that all infested fields are treated. In order to know when to apply insecticides for optimum results, careful inspection of fields should be made at least three times a week. Local authorities should be consulted as to the kinds and amounts of pesticides that can be used without leaving illegal amounts of residue at harvest.

Illustration of Spotted Alfalfa Aphids furnished Croplife through courtesy of the University of California.

Previous "Bug of the Week" features have been reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.

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TRADE WINDS

News That Charts Selling Opportunities for Dealers

Severe Hopper Threat Faces Western States

DENVER—The worst grasshopper infestation in recent years threatens range and crop land in Colorado, Kansas, Oklahoma, Texas and New Mexico, according to reports reaching the Federal Grasshopper Control Project offices here.

Surveys by entomologists show that 20,220,870 acres of range land alone in 16 western states are infested and of that total, 15,469,340 acres are in the five states.

The infested acreage in Colorado is 770,000, less than the 900,000 reported a year ago. However, the intensity of the current infestation is more severe.

Texas has 8,747,000 infested acres, compared with 1,750,000 a year ago; New Mexico 2,801,340, compared with 565,000; Oklahoma 1,944,000 compared with 500,000, and Kansas 1,198,000 compared with 93,000.

Largest build-up has occurred in the Texas panhandle and northwestern Oklahoma. In Colorado a number of areas have been designated as severely infested—14 to 28 'hoppers to the square yard. Largest of these are in Las Animas and Baca counties, and in eastern portions of Cheyenne, Kiowa and Prowers counties. There is a large "threatening" area in Yuma, Washington and Kit Carson counties.

Surveys show that Wyoming this year has only small areas of infestation. Entomologists have stated that this is because of the large amount of control work which has been done in that state in recent years. In the period from 1949 through 1951 4,250,000 infested Wyoming acres were treated.

Aphids Expected to Take Big Bite Out of California Alfalfa

BERKELEY, CAL.—California alfalfa growers are discovering that great losses from little aphids grow.

University of California research workers and farm advisers estimated the insect will destroy from \$15,000,000 to \$20,000,000 of alfalfa this year. This represents a \$2,000,000 to \$7,000,000 increase above last year's \$13,000,000 aphid-chewing loss, and a tremendous percentage-wise increase over the 1954 loss of \$500,000.

However, Ray F. Smith, University of California entomologist speaking at the agronomy section of the university's farm and home conference, urged growers not to plow out good stands of alfalfa and plant substitute crops because, he said, the aphid is easy to control if insecticides are applied 7 to 14 days ahead of each cutting.

He suggested growers combine spraying operations to prevent a field freshly sprayed from becoming re-infested by an untreated neighboring field.

CHEMICAL WEEK CHAIRMAN
TACOMA—Marshall T. Ramstad, Pennsylvania Salt Manufacturing Co., has been named Tacoma area chairman for Chemical Progress Week, April 23-28.

Oregon Agencies Stay on Alert For Khapra Beetle

PORTLAND, ORE.—If the khapra beetle escapes the diligent watch of officials in California and attempts to invade Oregon, this state's Department of Agriculture, educational agencies and tradesmen are primed to deal with it.

The latest link in this chain of preparedness was forged recently. F. P. Larson, entomologist in charge of plant pest survey work for the department's Division of Plant Industry, and an assistant spent two weeks getting first hand information in California.

They worked in actual field surveys in cooperation with the California Department of Agriculture and the Federal Plant Pest Control Branch, economic survey unit, Oakland.

They also studied California's control methods, including fumigation procedures and other phases of the program to keep the pest from spreading in that state.

California is the state closest to Oregon, but it is only one of three states in this country in which the khapra beetle has been found. The other two are Arizona and New Mexico. The California discovery was made in October, 1953, by August, 1955, 27 infested premises had been found in five Arizona counties, 121 in 16 California counties, and three in two New Mexico counties.

Oregon's department of agriculture is doing everything it can to be in readiness should this pest reach this state. Measures taken so far include quarantine, survey and education.

As soon as the pest was announced in California, Oregon set up a state quarantine against entry of stored grains or host materials from premises where the beetle had been found. This state measure was rescinded when a federal quarantine against entry of stored grains or host materials from premises where the beetle had been found was enacted.

Oregon, in cooperation with federal workers, immediately set in motion a survey of all warehouses and other places where grain is stored. Many storage places which receive grains from California, Arizona and New Mexico have been checked thoroughly from one to three times. This survey work is a continuing process.

In cooperation with the Oregon Seed and Feed Dealers Assn. and its various units, the department has presented an excellent film on the khapra beetle.

This film was prepared by the California Department of Agriculture, and lent to Oregon to help keep this state alerted on this serious economic pest.

DONATES TRACTOR

SAN MARINO, CAL.—The Soil Improvement Committee of the California Fertilizer Assn. has donated a new cultivator type wheel tractor, complete with special equipment for application of dry and liquid fertilizer material to the University of California for use in its research program. The tractor has been assigned to the university's Department of Vegetable Crops at the Citrus Experiment Station, Riverside.

Fertilizer Sales Show Increase in Oregon in 1955

PORTLAND, ORE.—Sales of fertilizers, lime and agricultural minerals in Oregon were greater in 1955 than in 1954, according to tonnages shown in the inspection fee reports submitted to the state Department of Agriculture.

For comparison with the 1955 figures below, here are the final figures for the calendar year 1954: fertilizers, 131,809 tons; lime, 42,519 tons, and agricultural minerals, 15,741 tons.

The 1955 figures are preliminary. The reports do not include sales made in packages of five pounds or less. The figures for agricultural min-

erals include such products as soil sulphur, gypsum, ground rock phosphate, boron and metallic salts.

Total fertilizers sold during 1955 amounted to 137,328 tons. Of this amount 114,410 tons were simple fertilizers, 22,918 tons were mixes and there was a breakdown of 12,176 tons of super phosphates and 1,161 tons of potash salts in the simple fertilizers. Lime amounted to 51,796 tons and agricultural minerals to 16,612 tons.

SOILS SCHOLARSHIPS

PORTLAND—The board of directors of the Pacific Northwest Plant Food Assn. has approved \$100 for one scholarship each for soils students at Oregon State College, Washington State College and the University of Idaho.

Measure the Growth



• All crops need nitrogen. When they do ...

SELL HORSE & LION NITROGEN FERTILIZERS

When your customers can measure the growth and can see a superior result from using a "HORSE & LION" nitrogen fertilizer... you can soon measure the increase in your sale of these great products. Proven the world over, "HORSE & LION" nitrogens are practical, effective. There are five types, for various requirements:

"Horse & Lion" Calcium Nitrate: 15½% pure nitrogen, combined with 28% available lime. Granulated.

"Horse & Lion" Ammonium Nitrate Limestone: 20½% pure nitrogen (10¼% nitric and 10¼% ammoniac nitrogen) and approximately 32 to 33% calcium carbonate. Granulated.

"Horse & Lion" Ammonium Sulphate Nitrate: 26% pure nitrogen (11% nitric and 15% ammoniac nitrogen). Granulated.

"Horse & Lion Urea 44": 44% pure nitrogen. Coated pellets for dry use.

"Horse & Lion Urea 46": 46% pure nitrogen. Pellets without coating for liquid application or dry use where fast dissolving desired.



For complete information and prices, contact your nearest "HORSE & LION" fertilizer headquarters.

ATKINS, KROLL & Co.

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When Pat McGillicuddy came back from lunch that spring day, his rotund, balding partner Oscar was not at his desk. The tall, blue-eyed Pat took off his grey topcoat and hung it up. "Where's Oscar?" he asked Tillie.

The plump, nervous bookkeeper looked worried. "Oh, he was mulling all morning about how slow some farmers are in paying," she said. "Then he telephoned one of them and had a long conversation with him. Finally he said he was going out to see him to work out a series of payments. Oh, Mr. McGillicuddy, I'm worried about him and you. You go on selling, and Oscar gets so mad when he checks up on customers' credit and finds that some of them are not good risks."

Pat laughed. "Poor Oscar, he sure wants to get the cash in, all right. And maybe I should pay more attention to collections—which I do when I think of it. But, Tillie, the books

don't lie. We don't lose too much on bad accounts every year, do we?"

Tillie shook her head. "No, but we lose a little more than average. And, the margin on fertilizer isn't too high. Oscar is right in one respect. We could make a lot more profit, if we watched those collections."

Once more Pat McGillicuddy laughed. "Good for you for saying what you think, Tillie. That's what I like about you. One time you will side with me, and then again you'll side with Oscar when you think he's right. You are playing fair with both of us, and I like that."

Tillie reached over and stroked the soft fur of Ann Hydrous, the Maltese cat that lay sleeping on top a table near her. "I play fair—yes, but it's giving me ulcers, Mr. McGillicuddy, and I do wish I could get rid of them."

Pat was silent for a moment. "I

know who's giving you ulcers," he said teasingly, "and if he doesn't speak up one of these years I'll tell him to."

Color flared over Tillie's fair face. "Oh, don't, Mr. McGillicuddy, please. I'd die of embarrassment."

"Well, I won't if you say so," he teased again, "but in my day young fellows weren't so slow, begorra, in speaking up. They didn't have so much bashfulness that they couldn't ask a girl—"

He broke off, because at this moment, Gil Haines, the scrawny necked sign painter, came in, carrying a sizable cardboard sign under his arm.

"Where's Oscar?" he said. "He told me I should deliver this sign to him in person."

"What!" declared Pat in amazement. "Did Oscar actually order a sign? I thought he didn't believe in any sort of advertising? Well, Haines, he's gone to the country and won't be back probably for a couple of hours."

The lanky sign painter scratched his head. "Well, I can't wait around that long. I'll just lay the sign face down on his desk. That's complying with orders as much as I can."

After the sign painter had gone, Pat and Tillie looked at one another, and then both laughed. "I've got to take a peek at the sign," Pat said. "I'm dying of curiosity, begorra."

"Oh, don't," Tillie said. "You always get angry when he looks at things on your desk."

"You're right again," Pat sighed. "So I won't take a look at the sign, even though I want to."

Pat didn't go out that afternoon. In fact, he sat at his desk looking for magazine clippings which he could use in the business, and he would continually turn to look at the door to see if Oscar had come back.

About four thirty Oscar did come back. Judging from the tight expression of his face and the set of his lips, Pat judged Oscar had really come to grips with some customer. Oscar walked over to Tillie and threw down a check. "I got a \$30 down payment out of Pete Jones," he said. "Ach, send it to the bank right away while it's still good, if it is."

Oscar came back to his desk, saw the sign, took a quick look at Pat who by this time was busy clipping a magazine. "Hi, Oscar," he said, without looking up.

"Hi," Oscar said, barely audible. He took the sign, looked at it, and then uttered a pleased "hm." He laid it face down on the desk again, then went into the warehouse. Pat and Tillie barely had time to exchange glances when Oscar came back, carrying a hammer.

He fished out some tacks from his desk drawer, placed the sign up on the wall above the desk and tacked it on. The sign and the copy were plainly visible to anyone coming near the railed off portion, which

separated the office from the sales room.

Pat looked at the sign sideways from where he sat, then got up and looked at it closer. His face was a fiery red.

"Oscar!" he gasped. "You really don't mean you want that sign up there—for customers to see!"

Oscar looked sweaty and very pugnacious. "Why not?" he said sharply. "It tells them something."

"It sure does!" Pat declared. "It tells them so much, it will drive them away."

He referred to a big illustration of a large bottle of red ink on the cardboard sign. This copy said: "We don't like to use red ink, so if you pay cash we won't need to use it. (Credit Department on the roof and it's very windy there.)"

Oscar looked sternly at Pat. "If somebody around this business can go around and order ads and signs on his own without telling me about it, ach, then I can do the same. I have as much money in this store as you have."

"That you have," conceded Pat, "but my ads and signs don't insult customers, and they are the life-blood of this business."

"Your ads and signs insult me," retorted Oscar hotly. "And they don't have any common sense. Somebody has to watch the money around here, see that it is collected and is not spent as fast as it comes in."

"Oscar," pleaded Pat, suddenly taking a new plan of approach. "We've been partners for eight years and we've made money, because we balance each other. For my sake won't you take down that sign?"

"Nein!" said Oscar stubbornly. "When I say nein to some of your suggestions, you go and do them anyway. Now, it is my turn."

Pat McGillicuddy choked back his words and began counting to ten like his wife Nora told him to do when in an argument with Oscar. But before he got to ten he whirled, put on his coat and walked out the door.

At sight of Pat striding out the door, a smile relaxed the broad, set features of Oscar. His eye lighted as he spotted a paper clip on a letterhead which Pat had tossed into their mutual wastebasket. Eagerly he bent down and retrieved the clip.

Tillie heard him say, almost happily. "This has been a very, very good day—for me. Ach, I hope I have many more like it."

California Chemical Employment Reported

SAN FRANCISCO — Employment in the chemical and allied product industry in California declined slightly in January from December, 1955, but was well above the figure recorded the previous January, the California Division of Labor Statistics and Research recently reported.

The report showed 36,900 wage and salary workers in the chemical industry this January, 700 more than the 36,200 employed last January. However, the figure was 400 less than the December, 1955 high of 37,300.

Wages of production and related workers jumped 44¢ per week between December and January . . . from \$89.98 to \$90.42. Hourly rates in the same period rose from \$2.17 to \$2.19.

In January, 1955, production and related workers were earning \$84.66 per week and \$2.08 per hour.

The average hours worked per week by production and related workers jumped from 40.8 in January, 1955 to 41.5 last December, but this January showed a decline to 41.1 hours per week.

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The ONLY HIGH CONCENTRATE FERTILIZER

CONTAINS 40% PLANT NUTRIENTS

20% Nitrogen. A combination of the quick-acting Nitrate form for early vigorous growth and the slow-acting Ammonia form for sustained growth through harvest time.

20% Available Phosphoric Acid in a form which retards reversion in the soil. Good for any soil—especially adapted for calcareous California and Arizona soils.

Uniform Pellets—chemically blended allowing no separation of ingredients in each single pellet.

Ideal for Cotton, Small Grains, Sugar Beet and Alfalfa—and generally for Field, Fruit and Truck Crops.

Packed in moisture-proof paper lined reusable 100 lb. burlap bags.

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FARM SERVICE DATA

Extension Station Reports

Washington farmers who want standard soil tests made can now get the job done at the Washington State college soils testing laboratory for one dollar instead of the former three-dollar fee.

In announcing the new rate, Dr. L. Madsen, director of the Institute of Agricultural Sciences, said the reduction was made because a review of the soil testing program after an exploratory period indicated that the laboratory could handle a larger number of samples making the lower rate possible.

The standard test includes determination of phosphorus and potassium as well as calcium and magnesium in some regions of the state plus the degree of soil acidity and the amount of organic matter. A similar test at an identical fee determines the acceptability of water for irrigation purposes. In addition to the chemical test farmers receive a crop interpretation of the tests.

A special nitrate and moisture test is also available for wheat growers. In addition to the standard soil test on the surface sample, this test measures nitrate and moisture content to a depth of six feet. Cost of this test is \$12.

Additional special tests are available for diagnosis of soil alkali and salinity. These cost 50¢ including a determination for gypsum. The gypsum test alone costs only 25¢.

★

There has been a 200% population increase of the spotted alfalfa aphid in Nevada during the last year, reports Robert Lauderdale, extension entomologist for the Max C. Fleischmann College of Agriculture, University of Nevada.

While the pest has stayed in the southern part of the state up to now, there isn't any assurance that northern Nevada alfalfa fields won't be hosting some aphids this year, cautions the entomologist.

The tremendous increase in spotted alfalfa aphid population showed up in a recent survey in Clark County. One hundred per cent of the alfalfa fields in the county are now infested with the insect, according to the survey. And more than 50% of those fields contain large enough populations so that if they aren't controlled immediately, severe crop damage will result.

In many fields the aphid has been active all winter long, says Mr. Lauderdale, and considerable damage has already been done with a consequent loss of stand. It is expected that still more stands won't survive or at least be very slow in starting this season.

★

University of California researchers are experimenting with several insecticides to control a new pest—a false spider mite which has the scientific name of *Brevipalpus lewisi* McGregor.

Walnut growers in particular are endangered by McGregor. Evidence that the mite is fanning out in English walnuts at Linden, Cal., was obtained by Abraham E. Michelbacher, associate professor of ento-

mology and parasitology at the University of California. The spider mite had apparently disappeared after infesting a single tree at the Linden experimental orchard in 1953, but returned late last year to destroy part of the orchard.

Predators effective in controlling real spider mites failed to check the false one. Although the mite is hard to detect because it is barely visible and causes injury similar to that of

the Pacific spider mite, there are key differences, said the entomologist. False spider mite leaves a copper sheen on leaves, defoliated areas are coated with white skins that it sheds, and little or no webbing occurs in the leaves. Mr. Michelbacher said further studies will be made to determine effective controls if the mite develops as a serious pest.

★

Milk producing costs can be cut anywhere from 20 to 25% by using good forage to replace grain in feeding a dairy herd, according to the California Fertilizer Association.

Specialists of the U. S. Department of Agriculture recommend that good forage should make up about 70% of the total feed for each milk cow. They point out that grain feeding of dairy herds has increased 25%

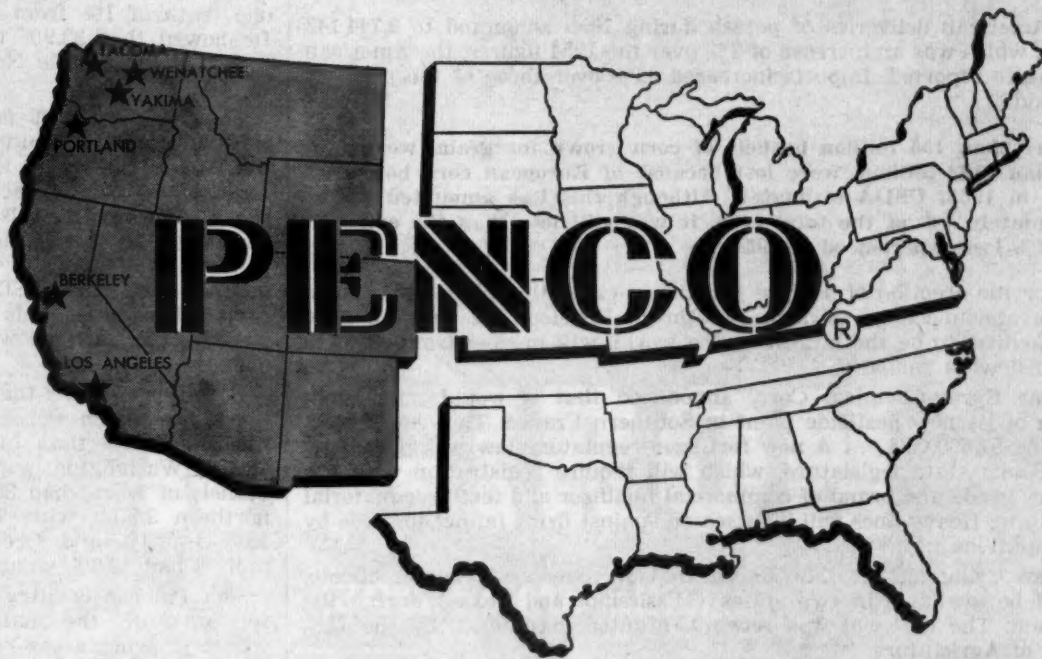
since 1947. This has added greatly to the cost of producing milk, reports the association.

When cows are fed more high quality forage and less grain, milk is produced at lower cost. This lower cost can mean higher profits per cow and per acre.

Agronomists estimate that pasture production could be increased three to four times by improved management methods.

Once the stands are well established, they can be maintained by regular top-dressings of the proper grade of fertilizer required to maintain balanced plant diet. The association is telling growers that the local fertilizer supplier is a good source of information concerning the fertilizer needs of pasture crops in the area which he serves.

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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

A reduction in the number of acres being planted for the 1956 crop year was reported by USDA. According to its figures for the 16 major crops listed, the reduction in 1956 will amount to some 3.4 million acres as compared to last year.

Over 2.2 million acres of timber were treated with pesticidal chemicals during 1955, the U.S. Department of Agriculture reported. In addition, some 450,000 trees were sprayed individually to control bark beetles. Efforts to control the spruce budworm accounted for spraying of 2,262,700 acres of a total of 2,274,300 acres.

A \$20 million lawsuit against Dr. Selman A. Waksman and Rutgers University over royalties on the antibiotic streptomycin was dismissed by a New Jersey Federal judge. . . . Richard D. Tayloe was named director of technical services for National Potash company, New York. In his new position, he helps fertilizer manufacturers with various problems.

Robert R. Heck was named by Southern Nitrogen Co., Savannah, Ga., as technical service representative in the company's southern area. . . . Production of anhydrous ammonia in the U.S. during 1955 totaled 3,163,041 tons, compared with 2,719,660 tons the previous year, the U.S. Department of Commerce reported. Significant gains were also registered in ammonium nitrate, ammonium sulfate, phosphoric acid, and nitric acid.

North American deliveries of potash during 1955 amounted to 3,744,143 tons of salts, which was an increase of 7% over the 1954 figures, the American Potash Institute reported. Imports increased 35% over those of the previous year, API said.

More than 155 million bushels of corn grown for grain, worth more than \$182 million, were lost because of European corn borer damage in 1955, USDA estimated. Although this loss amounted to approximately 5% of the total crop, it was still less than the estimated 7% loss experienced in 1954.

Plans for the erection of a large pyrethrum-extraction plant at Nakuru, Africa, were announced by African Pyrethrum Development, Inc., in New York. The facility, to be the largest in the world, will process from 2,500 to 3,000 tons of flowers annually.

California Spray-Chemical Corp. announced that it would soon begin construction of its new pesticide plant in Southern France. The new project will cost some \$1,500,000. . . . A new fertilizer regulatory law was passed by the Pennsylvania state legislature, which will require registration with the state of every grade and brand of commercial fertilizer and fertilizer material sold in the state. Heavy fines will be assessed against firms failing to abide by the new regulations.

American Cyanamid Co. announced that its new systemic insecticide, Thimet, will be available in two states (Mississippi and Texas) during the coming season. The material was recently granted acceptance by the U.S. Department of Agriculture.

Speakers at the annual spring meeting of the National Agricultural Chemicals Assn. at Hollywood, Fla. covered merchandising, public relations, creation of new markets and an industry-wide "read the label" campaign. The meeting was held March 14-16.

Petroleum Chemicals, Inc., jointly owned by Continental Oil Co. and Cities Service Oil Co., announced plans to build a \$12.5 million nitrogen plant at Lake Charles, La. It will produce 100,000 tons of ammonia annually.

Delay in bringing into effect the provisions of the "Soil Bank" was feared to mean it will not be effective in time for use during the 1956 season. Filling in by legislators favoring high price supports was reported to be hampering the passing of the bill.

Stauffer Chemical Co. and West End Chemical Co. announced a proposed merger of the two firms, in San Francisco. . . . Robert U. Haslanger was elected vice president of Escambia Bay Chemical Corp. . . . The California Fertilizer Assn. announced that its annual convention would be held Nov. 11-13 at the Hotel Del Coronado, Coronado, Cal.

J. C. Gaines, Texas A&M College, was named chairman of the Southwestern Branch, Entomological Society of America, at the group's annual meeting at Ft. Worth, Texas, Feb. 20-21. Dr. Gaines succeeds D. C. Earley, Los Fresnos, Texas.

Greater areas of infestation have been marked up for the gypsy moth which has increased its area of activity by 8,750,000 acres in the past two years, the U.S. Department of Agriculture reported. The pest was first known in the U.S. in 1869, but has spread widely since that time.

Acreage allotments for peanuts were expanded for the 1956 season, the USDA announced. The increase was for 40,342 acres in Alabama, Florida, Georgia, New Mexico, North Carolina, South Carolina, Tennessee and Virginia.

A survey conducted by Croplife indicated good reaction to the introduction of application machinery that would allow farmers to apply insecticides at the same time as fertilizer was put on, without the necessity of premixing the two materials. Machines were reported to be on the market by E. S. Gandrud Co., Owatonna, Minn., and John Deere Mfg. Co., Moline, Ill.

A concession in the original request made by railroads for a 7% hike in freight rates was granted the fertilizer industry by the Interstate Commerce Commission. The increase will be 6% rather than 7% on most commodities, with ceilings on the amount of extra cost per ton on some items.

1955 Blackest Smut Year on Record in Pacific Northwest

PORTLAND, ORE.—Last year was the blackest smut year on record in the Pacific Northwest, two reports released here revealed.

The black fungus robbed Pacific Northwest wheat growers of an estimated \$5 million in production losses and dockage by the trade and washing charges on 29 million bushels of smutty wheat out of a total production of 86,439,000 bu. in Washington, Oregon and northern Idaho.

Thirty four percent of the wheat graded smutty last year, an increase of 11.7% over 1954.

The facts on the 1955 smut situation were reported by Dr. C. S. Holton, U.S. Department of Agriculture plant pathologist at Washington State College, to a regional extension smut-control committee composed of USDA and land grant college plant pathologists and representatives of the grain trade.

A USDA grain division report also made at the meeting differed only one tenth of 1% from Dr. Holton's. It showed that 33.9% of the wheat grown in the Pacific Northwest was smutty.

The Holton report is made from questionnaires distributed throughout the Pacific Northwest Grain Dealers Assn. of Spokane. The questionnaire shows data by bushels received at elevators. The sample included slightly more than half the wheat grown in the area. The USDA report is compiled from records of handlers who sample each grower's consignment.

Both reports show that smut conditions were much worse in Washington and Idaho than in Oregon. By states, Washington with 55 million bushels of wheat had 39.6% smutty; northern Idaho with 7,500,000 had 38% smutty, and Oregon with 22 million had 12.3% smutty.

The Palouse country of Washington—one of the nation's richest wheat growing areas—produced 16,216,000 bu. of wheat and 61% of it was graded smutty. (In 1952 Whitman County, Washington, which includes much of the Palouse alone produced 22 million bushels of wheat with a record yield of 34.6 bu. to the acre.)

Elmar, a white club wheat released in 1950 and hailed as resistant to half the then-known races of smut, accounted for 30 million bushels of the Pacific Northwest production and 53.8% of it graded smutty.

High on the list of production (fourth) was Elgin, the wheat Elmar was developed to replace. Elgin racked up a 33.1% record for smut.

Dr. Holton said his survey seems to indicate that club wheats carry the smut problem with them wherever planted.

George W. Schmitz New Calspray Agronomist

RICHMOND, CAL.—Dr. George W. Schmitz is the new research agronomist for the California Spray-Chemical Corp., Leo R. Gardner, manager of research and development for Calspray recently announced.

Dr. Schmitz will work in the field studying the soil needs in the area around San Jose, Cal.—his headquarters. He was formerly assistant professor in the Soils Department of Oregon State University and has worked at the Klamath Experiment Station in Oregon.

He has published works in "Soil Science," and has patented a process in the field of fertilizer technology.

Administration Farm Policies Outlined At Oregon Meeting

PORTLAND, ORE. — The Eisenhower administration has been battling pretty high with Congress in obtaining new farm legislation, Ervin L. Peterson, assistant secretary of agriculture, told members of the Oregon Feed & Seed Dealers Assn. attending the 25th annual convention here March 16. Mr. Peterson said that the administration had proposed the soil bank program as a device to get at problems created by unwise agricultural policies of the past.

Purpose of the soil bank, he said, is to reduce production, to make inroads on surplus accumulations and to permit price support programs to operate as a market-facilitating rather than an income-sustaining program. Another objective is to relieve pressure on feed grains and animal protein products by transferring acres from feed grain production into grass and trees.

Jesse H. Harmond, agricultural engineer at Oregon State College, told the convention that new methods of seed harvesting and improved equipment could greatly reduce the amount of seed damaged or left in the field.

Gov. Elmo Smith assured some 300 members of the feed and seed trade and allied industries attending of the cooperation of all state departments in handling their various problems connected with state government.

Other speakers at the convention included James W. F. Carman, bishop co-adjutor of the Episcopal Diocese of Oregon; Dan Dunham, president of the Future Farmers of America, and Carroll O'Rourke, advertising specialist of Portland.

William J. Stoll, H. J. Stoll & Sons, Portland, and one-time All-American football star of the University of California, was named president of the association. Mr. Stoll succeeds Edward G. Wyss, Dairy Cooperative Association feed department manager, Portland.

Russ Hays, Commercial Review editor and acting manager, was named manager to take over the post held since the group's founding by Leon S. Jackson, now manager of Pacific Northwest Plant Food Assn. Other new officers are Fred Trullinger, Jr., Portland Seed Co., vice president, and Harold Davis, Buchanan-Cellers Grain Co., McMinnville, secretary-treasurer. The new board of directors includes Walter Scott, Jr., Scott-Palitzsch Feed Mills, Portland; Ernest G. Warner, Gresham (Ore.) Feed & Seed Co.; James McDowell, McDowell Bag Co., Portland; Fenn Emerson, Chas. H. Lilly Co., Albany; Ray Hughes, Ray Hughes Farm Store, The Dalles.

District governors previously elected include Stanley Fagg, Northrup King & Co., Albany district; William David, Standard Feed & Seed, Eugene district; Howard Jenks, Jr., Jenks-White Seed Co., Salem district; Myron Madsen, Bernards Madsen Grain Co., Carlton, Washington County district; George Barr, Medford Feed & Seed Co., Medford, southern Oregon district.

OREGON THREAT

PORTLAND, ORE. — One more problem may be added to those which Oregon farmers will face this season. The spotted alfalfa aphid, a destructive new insect pest, is now in Utah, Nevada and northern California with no assurance that its explosive spread will stop at the Oregon border. Entomologists at Oregon State college will be on the lookout for it in their insect surveys this season.

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Donald F. Starr Named by Ryania Corporation to Be Representative in U.S.

UPPER MONTCLAIR, N. J.—Dr. Donald F. Starr has been named as American representative for the Trinidad Ryania Corporation, it has been announced. Dr. Starr, for the past several years, has been a consulting chemist specializing on insecticides.

Ryania insecticides, used in the U.S. only since 1946, are processed from the ryania plant grown in the British West Indies. The insecticidal properties of the plant have been known for more than 60 years, however. In 1897, a book written by S. Cortes, a botanist, made its appearance describing the properties of a plant of the genus ryania, which was known by natives as the "Mata Cucarachas," meaning "cockroach killer."

Experiments in the U.S. have indicated the insecticide's use in control of European corn borer, sugarcane borer, cranberry fruitworm, codling moth on apples, and certain household insects. It is claimed that the material leaves no residues on the crops treated.

Tests by the Louisiana Agricultural Experiment Station have been made with ryania for a number of years, in control of the sugarcane borer. It is reported that the material was successful in controlling the pest and at the same time did not affect beneficial predators.

Applications of ryania sprays on apples are reported to have controlled codling moth without killing predaceous mites, thus reducing the possibility of infestations of European red mites. The University of Maryland has pointed out in a recent bulletin that ryania can be used on apples close to harvest time because of the material's lack of residual properties.

The program of the Trinidad Ryania Corp. includes the systematic harvesting of the ryania crop in Trinidad, and increased availability and use of ryania insecticides. During the first few years that commercial quantities of ryania were taken from Trinidad, there were no regulations regarding the cutting of the shrubs, and it was feared that without proper supervision the future crops would be jeopardized just as in the United States there was a time during which haphazard timbering threatened our supply of lumber. The Trinidad Ryania Corp. will obtain its supply from people licensed to cut ryania on government lands in Trinidad, which represents approximately 98% of the total supply from Trinidad, the company says.

Atlas Establishes Patents Department

WILMINGTON, DEL. — Atlas Powder Co. has established a new department to handle license, patent and trademark matters for all divisions and departments of the company, it was announced recently by Ralph K. Gottshall, president.

Kenneth E. Mulford has been named to direct the new department. In addition to his new duties, Mr. Mulford will continue to serve as assistant to Edward J. Goett, vice president in charge of Atlas' chemicals division. Roger R. Horton, of the Atlas legal staff, has been appointed assistant director of the new department.

Mr. Mulford served in a number of executive posts in the Atlas legal and chemicals departments before being appointed assistant to the vice president of the chemicals division in 1954. He holds degrees in electrical engineering and law from George Washington University. He served for several years in the U.S. Patent Office before joining Atlas in 1934.

Mississippi Specialists Urge Farmers to Use Maximum Fertilization

JACKSON, MISS. — Mid-South farmers were told that the "use of fertilizer is your best bet for high yields of all crops this year." The advice came from W. R. Thompson, Mississippi extension agronomist.

Mr. Thompson said carry-over of plant food during the dry years along with the amount of fertilizer applied in 1955 helped produce the highest acre yields of cotton and corn ever produced. These high yields removed more plant food in 1955 than average yields have been removing the past five years, he added.

"Do not cut down the recommended rate of fertilizer for each crop you grow," he said.

T. M. Waller, extension cotton specialist, said for most economical yields of cotton on average soil, 600 lb. of mixed fertilizer should

be used in foothills of the Delta and hill areas. Enough mixed fertilizer should be used to give 72 lb. of nitrogen, 48 lb. of phosphate and 48 lb. of potash per acre, he said. After cotton is chopped out and before squaring, he advised side dressing with 40 lb. of nitrogen.

In the Delta area, he advised using an average of 100 lb. of nitrogen per acre before planting. On light Delta soils this 100 lb. of nitrogen can be applied, half before planting and half side dressed.

In any area of Mississippi, if soil is above average, farmers were told they can go higher on rates of fertilizer than recommended. For corn, apply 500 lb. of mixed fertilizer in foothill and hill areas and side dress with 60 lb. of nitrogen per acre when corn is knee high, Mr. Waller said.

In the main Delta area, apply 90 lb. of nitrogen per acre before planting corn.

"Most Delta farmers would rather

apply all the nitrogen before planting to save labor," Mr. Thompson said. "Splitting the application is a good practice. You can make profitable corn increases on most Delta soil using up to 120 lb. of nitrogen per acre.

"Do not plant any crop without using fertilizer. It doesn't take any more labor to grow a big yield per acre than it does to grow a low yield per acre.

"Study your soils and place fertilizer four to six inches under the seed drill. Some soils are shallow, and you should not place fertilizer as deep as on deep soils."

New Oklahoma Firm

OKLAHOMA CITY — Muskogee Fertilizer Co., Inc. has been granted a charter. Capital stock is \$100,000. Incorporators are Marshall V. Perry, Sand Springs, Paul R. Smith Jr. and Bobby M. Bolt, Tulsa.

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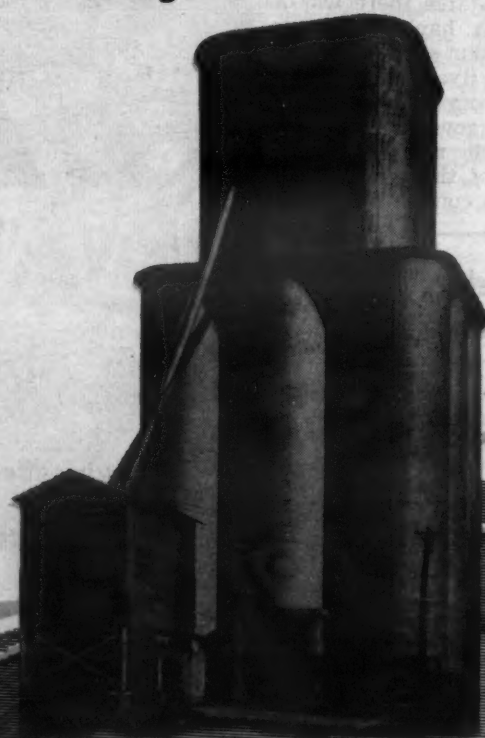
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Rust Control

Chemical control of rust is only a second step in the control of rust-resistant wheat even if there would control a single application. The Canadian wheat culture's plan in Winnipeg.

Unfortunately, which durum wheat is completely rust-resistant is not available. The use of chemical control is looked.

The Canadian tests on a small amount of labor. There, chemical usefulness as includes tests the latter and the greenhouse looks promising where further experimental have been tested on the company laboratory.

Antibiotic received a importance done. This is, but labor size that it mental stage under study rust control on the too drastic be.

The problem for rust control yet to be solved aircraft is less the gal reduced. Trade does consider ing grain, officials say, ance of most enough.

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WORLD REPORT

By **GEORGE E. SWARBRECK**
CROPLIFE Canadian and Overseas Editor

Rust Control

Chemical control of rust would be only a second-best method to the use of rust-resistant wheat varieties, even if there was a chemical that would control this plant disease with a single application. This view has been expressed by Dr. T. Johnson of the Canadian Department of Agriculture's plant pathology laboratory in Winnipeg.

Unfortunately for some crops, of which durum wheat is one, no completely rust-resistant varieties are available. Therefore, the possibilities of chemical control cannot be overlooked.

The Canadians are carrying out tests on a small scale at the government's laboratory in London, Ont. There, chemicals are tested for their usefulness as fungicides and this includes tests on rust control, though the latter are confined to work in the greenhouse. Any fungicide that looks promising is sent to Winnipeg where further tests are made on experimental plots. Some fungicides have been tested on farms by chemical companies and the government laboratory has cooperated.

Antibiotics in particular have received attention with special importance being attached to actidione. This chemical shows promise, but laboratory officials emphasize that it is still in the experimental stage. Streptomycin is also under study and has given partial rust control. Unfortunately, the action on the wheat plant itself is too drastic for use to be practical.

The problem of applying chemicals for rust control on a farm scale has yet to be solved. Application from aircraft is out of the question unless the gallonage per acre can be reduced. Tractor drawn machinery does considerable damage to standing grain, agricultural department officials say, while the boom clearance of most equipment is not great enough.

The officials believe that newer equipment of the self-propelled type will overcome these difficulties in time, but the cost, in addition to the expense of the chemical, would make this form of rust control a costly proposition.

Austrian Production

The Austrian firm of Österreichische Stickstoffwerke A. G. produced 570,000 tons of nitro-fertilizer during 1955. Production this year is expected to top 600,000 tons.

About 560,000 tons of the 1955 output were sold, three quarters going to export outlets in 26 countries. Of the buyers, 48.5% were European countries, 34.5% Asian and 3.1% to the U.S.

The firm is spending more money than ever before on research and development, with 3% of the turnover going for these purposes. The Stickstoffwerke Linz is said to be among the largest and most modern nitrogen works in Europe and it claims to be the 15th biggest business in the world.

Insect Damage Loss

The annual loss in Canada due to livestock and field crop insect damage has been placed as high as \$312 million. In the U.S. it is estimated

that for each dollar spent on insect control an average of \$52 is returned. On this basis Canadian livestock men can save more than \$67 million annually by carrying out recommended chemical control measures against insect pests, according to agricultural officials.

Field crops have suffered considerably over the years from damage by insects such as grasshoppers, wireworms, cutworms, and sawflies. This loss has gradually been reduced since the introduction of newer and better insecticides. In Alberta for example, in 1951, treatment of 296,000 acres for grasshopper control saved a crop valued at \$6 million. This was done at a cost of \$50,000 and represents a return of 120 to 1 on expenditures. In 1949 the grasshopper control campaign in Saskatchewan saved a crop worth \$50 million at an expense of slightly over \$1 million. The return on the investment in this case was approximately 41 to 1.

Canadian Tax Cut

The Canadian government's financial department has repealed the 10% sales tax on poisons used in agriculture or horticulture, part of a plan to give aid to farmers whose incomes have declined in the past two years.

The repeal of the tax is expected to bring a reduction in the cost of herbicides, fungicides and insecticides.

New Plant Research Department Formed At New Mexico A&M

STATE COLLEGE, N.M.—A new department of botany and entomology has been formed at New Mexico A&M College, Dr. R. A. Nichols, dean and director of agriculture, reports. The new department will carry on research work in plant pathology, entomology and related fields for the A&M Agricultural Experiment Station. The biology department, which formerly handled these functions, will be concerned only with teaching from now on.

Head of the new department is J. G. Watts, who until recently, had been with the South Carolina Experiment Station for the past 24 years. Mr. Watts, a graduate of Clemson College, will receive his Ph.D. from Ohio State University in June. He served in World War II as a colonel with the U.S. Army overseas.

Other members of the department are Dr. R. C. Dobson, assistant entomologist, and Dr. John E. Chilton, assistant plant pathologist. Dr. Dobson has previously been employed by A&M College as an instructor, extension entomologist and khapra beetle control officer. He received his doctor's degree from Oregon State in 1953.

Dr. Chilton had been stationed in Aztec, N.M., since 1952, as a member of the A&M research staff.

COTTON GROUP TO MEET

MEMPHIS, TENN.—The Arkansas-Missouri Cotton Trade Assn. will hold its annual meeting April 10 at Pine Bluff, Ark. Claude L. Welch, director of production, marketing, research and education of the National Cotton Council, and L. G. Hardeman, Jr., vice president of the American Cotton Manufacturers Institute, will make talks. Mr. Hardeman is president of Harmony Grove Mills, Commerce, Ga.

Spring Farm Work Moves Ahead in Mid-South States

MEMPHIS—Farmers in the Mid-South took advantage of warming and clearing weather to make a big dent in farm work preliminary to spring planting of cotton, corn and other crops.

C. A. Vines, associate director of the Agricultural Extension Service in Arkansas, could not give exact figures on the number of acres prepared for planting, but said it would add up to an impressive total this year.

He said Arkansas farmers are taking a step further in mechanization this year, continuing a trend of past years, although mules and plows still can be seen on some farms.

Most farmers are getting their seed ready for planting and large numbers already have bought their fertilizer for this year's crop.

Farmers in Mississippi are taking advantage of the weather to get 1956 row crops off to an early start, the Mississippi Agricultural Extension Service, said.

Cotton and corn planting both are underway in the southern half of the state. Clovers and spring grasses are making rapid growth and furnishing good grazing.

Hornflies have begun to show up in some areas of the state and farmers are taking steps to control them, said A. G. Bennett, extension entomologist.

Land preparation has rolled into high gear, in West Tennessee's 21 counties, according to Judd Brooks, district farm agent at Jackson. Lake County, a delta region, seems to be more advanced than its neighbors, Mr. Brooks said. Disking and land breaking for cotton, soybeans and alfalfa has been underway there for several weeks.

INTOXILIZER

MEXICO CITY—A special mixture of fertilizer is being used to increase production on the maguey crop from which Mexico's favorite strong drink, tequila, is made. The country's largest tequila brewery, which is applying the nitrogen and potassium plant food to the 6,000,000 plants it raises, says that production has been boosted 20% and that maturity time for the plants is reduced from 12 years to 10. Tequila, well known from antiquity, provided joy juice for Aztec Indians hundreds of years ago.

Harold E. Jones to Head Kansas Extension Service

MANHATTAN, KANSAS — Dr. Harold E. Jones, extension soils specialist at the University of Minnesota, has been named director of the Kansas Extension Service, effective June 1, Arthur D. Weber, dean of agriculture at Kansas State College, announced recently.

Dr. Jones fills the vacancy caused by the death of L. C. Williams. His appointment completes the reorganization of the total agricultural program at Kansas State with three directors administratively responsible to Dean Weber. Glenn H. Beck and C. Pears Wilson are the other new directors of the agricultural experiment station and the school of agriculture, respectively. Paul W. Griffith, associate extension director under the late L. C. Williams, will continue as associate director under Jones.

Dr. Jones, 39, is a native of Concordia, Kansas, and a former associate professor of soils at Kansas State from 1946 to 1949. He has been at Minnesota since leaving Kansas State.

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INDUSTRY SALES OUTLOOK

(Continued from page 1)

this year. They are conservative optimists.

They appraise the current year's sales outlook as one which may show a small decline in industry tonnage—possibly as great as 3%, but they make this major qualification that in terms of plant food ingredients, the fertilizer industry's sales record this year will be equal to that of a year earlier.

They ascribe this optimism primarily to the belief that the farm community has slowly been educated to the importance of plant foods and pesticidal chemicals. These materials help to hold down costs of production per commodity unit and are as necessary to good farming practices as gasoline to run the farm tractor. Good practices of this kind cannot be discarded because of the obvious squeeze now facing many farmers.

This is a firmly-held contention with USDA land use economists. They believe that field crop farmers cannot afford to reject good management practices which the farmers themselves through their own experience, have seen pay off in greatly increased yields of field crops and lowered costs per unit of output.

These conservative industry optimists say that undoubtedly the farmer this year in a price squeeze will be a more cautious buyer. His disposable dollars are fewer than a year ago. The weather in many areas of the nation has been unfavorable to encouraging farmers to go ahead with plans. In many areas, spring activity has been discouraged by extreme wetness whereas in other areas drought persuades the farmer to delay commitments until a more favorable turn can be foreseen.

Finally, these conservative optim-

ists say that shipments of potash this year for agricultural uses are not seriously below those of last year and in this condition they find an accurate common denominator which the entire industry may observe with confidence and profit.

These optimists seem to be saying that the sales staffs of the industry are in a tense period waiting for the farmer to move into action.

The industry experts believe that the major difficulty for the plant food industry may be a tremendous demand as soon as the farmers see the green light.

These optimists believe that while the Congressional delay in pushing through farm legislation has been a factor which has confused many farmers, it is less of an evil than the weather and the income squeeze in some farm areas. All is not as black in the farm communities as critics of the Benson farm program would have farmers believe. For example, in the Southeast, income in the old Cotton Belt last year was better than it has been in several years. The chief sufferers in the farm communities have been the hog farmers whose prices hit bottom last fall.

One observer reporting through here now feels that "hogs may swing the fall elections." This opinion cites the recent climb of hog prices from approximately the \$9.50 low to a price now about \$16 with good prospects that it may run up as high as \$22 by late summer.

USDA policy determinations all point for higher corn prices and a discouragement to any expansion of swine production. This leads to a sound economic conclusion that the part-time fringe hog farmer will not be attracted into some

speculative hog raising operations later this year. All of which would seem to provide a sound basis for the corn-hog economy well into 1957.

It is necessary to take this trip into the future to appraise the sales outlook for the immediate year for the plant food industry. It is urgently important that field sales forces of the plant food industry take a long look at the possibilities in the months ahead for the farm communities.

For plant food industry dealers, it is believed they would be remiss in their duty to their customers if they failed to point out the silver lining in what has been too generally described as a potential economic disaster to the entire farming area of the nation.

It is urgent that the farmers in every community be given an accurate report of the direction of USDA policies and to be informed of what lies ahead. The corn that will be planted this year will be marketed next year in probably better priced hogs. Most observers believe now that the hog price decline has been reversed and that by late summer hogs will sell in a \$20-22 range and that a strong corn price will effect a sharp reduction in fall pig crop intentions.

These conclusions do not take into consideration serious drought conditions which could effect a large liquidation of livestock, but it is probable that with huge CCC stocks of feed grains on hand such a liquidation would not be as large as serious drought conditions might ordinarily influence.

On the pessimistic side, or from the less optimistic viewpoint, these trade sources are evidently fretful over the lag in sales commitments. They fear that delay in placing orders will ultimately mean that orders may come in too late for the producers to meet demands in time for use on farms.

Yet, these same mild-pessimists admit that in this particular industry they have by no means abandoned hope and like good merchants they have adopted a supply device wherein they may be able to offset the delays in buying which they detect in the farm communities. In one basic industry in particular it is learned that carlot shipments of plant food materials have been consigned to railroad hold points so they can divert supplies when demand develops later. In short, the pessimists are less convincing than their optimistic counterparts.

Standing with the optimists are the USDA impartial observers who have no special fish to fry. These land use economists are convinced that the farm community will not reject the prudent use of plant foods merely because of the price squeeze. They admit that the farmer may be a closer buyer this year in terms of tonnage, but it is logical that after successful experience with the use of plant food ingredients by themselves or their farm neighbors, farmers will see the simple arithmetic of greater yield per acre of their crops and a lower cost per unit. In such a condition, the prudent farmer has a good hedge against lower grain prices. The true measure of profit is the volume of a crop times the price he may get for it in the market place.

Plant food industry dealers who sense an uncertainty in their farm area may speak with assurance in telling customers that USDA is directly headed to a sales policy of CCC corn stocks which should make for better feed grain prices later this year. If and when the farmer understands this situation, the dealer-distributors of plant food may find the now-reluctant farmer an eager customer.

Much of the farm problem has been due to a lack of understanding by the farmer himself of the issues at stake. He has been swayed by

transient newspaper headlines which seize upon every temporary change in political winds to blow up sensational copy.

It is hard to believe that the plant food industry will not come through this year with an equally good sales volume as last year in terms of plant food materials. That may not mean as large profits to the industry, but it surely means that the farm consumer of these materials will be buying a big dollar's worth of value.

That may be described as the contribution of the plant food industry to the farmers' current cost squeeze situation. It is a point which deserves broad dissemination among the farm communities.

PESTICIDE EXPORTS

(Continued from page 1)

curred in exports to South America and the Caribbean area, although the trend was upward.

In spite of increased production of pesticides in Europe, U.S. exports to that area were 19% above the 1954 level, BDSA reported. The largest rise occurred in the classification of "miscellaneous agricultural insecticides and related materials," which includes the newer products, many of which are not manufactured outside the U.S.

Shipments to Asia and Oceania rose 12%, while Africa as a market showed the greatest percentage increase, 58% over the 1954 rate.

Following are 1955 shipments, with 1954 shipments in parentheses:

To North America—188,807,000 lb., valued at \$34,464,000 (141,700,000 lb., \$25,108,000).

To South America—54,099,000 lb., \$15,805,000 (65,430,000 lb., \$14,372,000).

To Caribbean area—11,011,000 lb., \$2,556,000 (9,730,000 lb., \$2,108,000).

To Europe—14,374,000 lb., \$6,463,000 (15,460,000 lb., \$5,445,000).

To Asia and Oceania—33,469,000 lb., \$14,075,000 (33,760,000 lb., \$12,570,000).

To Africa—21,855,000 lb., \$4,465,000 (14,773,000 lb., \$2,830,000).

Among the principal customers for exports in 1955 were Mexico, 62,130,000 lb. valued at \$11,145,000; Canada, 26,071,000 lb., \$8,514,000; Brazil, 17,071,000 lb., \$5,231,000; Nicaragua, 18,617,000 lb., \$4,067,000; India, 11,779,000 lb., \$4,498,000; Colombia, 14,615,000 lb., \$3,301,000; Venezuela, 9,587,000 lb., \$3,015,000; Costa Rica, 19,824,000 lb., \$2,427,000; Honduras, 21,843,000 lb., \$2,539,000; El Salvador, 13,108,000 lb., \$2,361,000, and Peru, 7,386,000 lb., \$2,051,000.

Disease Takes 10% Nip at Texas Cotton

AUSTIN, TEXAS—Cotton disease reduced the 1955 crop by about 10% according to the Statewide Cotton Committee of Texas. The major diseases were root rot, bacterial blight, verticillium wilt, seedling diseases, fusarium wilt and nematodes.

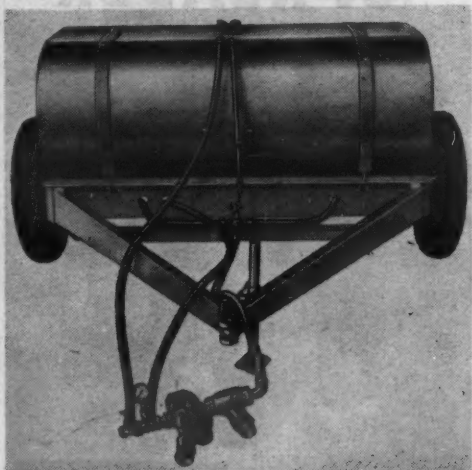
The quality of the cotton may be reduced two ways by diseases, said the committee. The bolls may be killed before they reach maturity, thus producing inferior cotton. The second way is that diseases may cause discoloring and weakening of the fiber.

Much of this loss can be avoided, producers will follow instruction sent out by the extension service at the state experiment stations, the committee pointed out.

GRASSHOPPER CONTROL

KIM, COLO.—William Howe Kim has been named head of a committee of Las Animas and Bent county landowners which has been formed to fight grasshoppers. The landowners will pool resources in 1956 control campaign.

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You should be able to substantially increase your sales of fertilizer because of the practicability and ease of application the new "Liqui-Flo" provides. The Kelly Ryan "Liqui-Flo" is a low cost machine of simple design and construction. It has only one heavy duty large nozzle that covers a 24 ft. swath with a density controlled by the tractor speed. The P-T-O pump filter gauge unit is compact and nearly fool proof. Maintenance

is at a bare minimum. Because of the enthusiastic reception, we are scheduling one more limited run prior to spring. We urge that you get your order in at the earliest convenience, so that you, too, may have Kelly Ryan "Liqui-Flo" working for you this spring.

Delivered Complete with Good Tires and New Tubes

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ATTEND DOUGLAS SALES MEETING—Salesmen from 12 sales districts throughout the U.S. and personnel from the home office gathered in Kansas City recently for the annual national sales meeting of the Douglas Chemical Co. The meeting this year also marked the 40th anniversary of this Kansas City firm which produces and sells agricultural chemicals and fumigants for grain sanitation purposes and insect control. In addition to the various training and information sessions, the meeting featured the premier showing of the company's new film,

"The Hungry Horde," which is the story behind Tetrakote, a new liquid grain protectant developed by the company.

Those attending the four-day event were (left to right): Front row—D. G. Farmer, advertising manager; Joe L. Kirk, director of sales and advertising; W. C. McCaslin, executive vice president; Norman F. Burk, Research Institute of America; John Owens, Research Institute of America; Barney Mahoney, sales manager, and Paul Smith, district manager. Middle row—Ed Keefe, district manager; Ward A. Graham, technical director; Bob Lathy, district manager; Fred Klemp, The Carter Co.; August Collis, district manager, and J. H. Sund, controller. Back row—Jim Avery, The Carter Co.; Bob Byrd, district manager; Harry Bostron, district manager; Paul Crawley, district manager; M. H. Johnson, district manager; John Collins, district manager, and Charles Dougherty, district manager.

Dow Chemical Names Four to Agricultural Planning Group

MIDLAND, MICH. — The Dow Chemical Co. has announced the appointment of four men to key positions in the sales planning, sales development and education section of agricultural chemical sales.

Hillard L. Smith, section head, is handling additional duties in connection with herbicides, insecticides and fungicides. John H. Prine is assigned to market analysis and sales records, statistics and forecasts.

Hollis H. Brower is responsible for veterinary and feed chemicals, fertilizers and chelates. Earl M. Lutz provides technical assistance to farmers, Dow product distributors and salesmen on the use of space and grain fumigants as well as soil fumigants for a variety of crops and for renovating turf on football fields and golf course greens.

The section handles long range sales planning, development of markets for new products and new uses for established products, educational activities and contacts with extension service personnel and vocational agricultural instructors.

Mr. Smith was head of herbicide sales for seven years before taking over as supervisor. Prior to assuming their new duties, Mr. Prine served six years as staff assistant to W. W. Allen, manager of agricultural chemical sales; Mr. Brower with agricultural chemical development working on feed supplements and veterinary chemicals since 1953; and Mr. Lutz as superintendent of the methyl bromide plant for three years.

G. L. F. Exchange Offers Members' Spring Discount

ITHACA, N.Y. — A "members' spring discount" of 4% on a variety of farm supplies, including formula fertilizers, has been announced by G. L. F. Exchange, Inc., Ithaca.

The discount period began April 2 and runs until further notice. Eligible for the discount are 118,000 farmers in New York, New Jersey and northern Pennsylvania who own one or more shares of common stock in G. L. F. Exchange, Mr. Silcox said.

He said that the discount was expected to save the 118,000 farmer-members \$1 million on production supplies.

Gloomicides

Lawyer: "You say you were about 35 feet away from the scene. Just how far can you see clearly?"

Old Farmer: "Wal, when I wake up I see the sun and they tell me that's about ninety-three million miles away."

A politician was asked why the House had a Foreign Affairs Committee and the Senate a Foreign Relations Committee. "When I was in the House," he replied, "I was told that the difference was that the Senators were too old to have affairs. They only have relations."

A certain minister was fired by the board of deacons and, protesting his dismissal, he said to the board: "Didn't I argufy? Didn't I magnify? Didn't I glorify?"

"Yes," they told him. "You argufy, magnify and glorify, but you don't tell us wherein. We want a preacher who will tell us wherein."

A Texas farmer was the owner of a prize bull. A stranger who had admired the animal asked, "What will you take for your bull?"

"That depends," the farmer replied. "Are you a tax assessor, or has he been killed by a train?"

The Chief Yeoman, a new man at his heels, stepped up to the big battle wagon's skipper and saluted smartly.

"Sir," he announced, "I thought the captain would like to know about this new inductee we've just drawn from boot camp. He's Elmer Q. Puddintop, author of the book, 'Our Navy Is Run by Half-Wits.'"

A man asked his doctor quite frankly what was wrong with him. "Well," said the doctor, "you eat too much, drink too much and you're terribly lazy."

"Thanks," the patient replied, "but would you be kind enough to put that into Latin? Then I can have a week off from the office."

The way we have finally figured out the claims of cigarette advertising is that cigarettes will cure just about anything except the hundred and one health disturbances which come from smoking the things.

Laboratory Consolidation

STATE COLLEGE, N.M. — New Mexico's feed and fertilizer control laboratory will be consolidated with the laboratory divisions of the state's other agricultural regulatory services effective July 1. This was announced by Dallas Rierson, director of the State Department of Agriculture here. He said that economy and efficiency would result from the consolidation.



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Diverted Acre Crops Planted in Texas Area

LOVINGTON, TEXAS — Farmers in this area are planting a variety of new crops on diverted cotton acres. An unusually heavy onion crop is in store for this year. The men spearheading this move are four Japanese-American farmers, Henry Harada, Joe Ysasi, and Robert and Tadao Uremo. These growers will have several hundred acres in onions. Potatoes are also being planted on several farms in the county, and will possibly total nearly 1,000 acres.



MAKERS AT PROGRAM—The campus of North Carolina State College, Raleigh, was the scene of Olin Mathieson Chemical Corp.'s irrigation sales meeting recently. Pictured above are some of the speakers appearing on the one-day program. From left to right, they are: C. H. Morris, chief engineer, Chrysler Marine & Industrial Engine Corp., Trenton, Mich.; George Duncan, representative for Wisconsin Motor Corp., Milwaukee; K. H. Oadigan, president in charge of sales, Gorman-Rupp Co., Mansfield, Ohio, and G. G. Williams, manager of irrigation research and development for Olin Mathieson, Little Rock, Ark.

MEETING MEMOS

April 10-12—Council for Agricultural and Chemurgic Research, 21st Annual Conference; Congress Hotel, Chicago; sec., John W. Ticknor, Council for Agricultural and Chemurgic Research, 350 Fifth Ave., New York 1, N.Y.

April 11-12—Regional Pasture Tour in Eastern Virginia, arranged by Virginia Polytechnic Institute Agricultural Extension Service.

April 16-17—Fourth Annual California Fertilizer Conference, Citrus Experiment Station, University of California, Riverside; Sidney H. Bierly, secretary, 457 Huntington Drive, San Marino 9, Cal.

May 7-9—Carolinas-Virginia Pesticide Formulators Assn., Inc., Spring Meeting, Ocean Forest Hotel, Myrtle Beach, S.C.; W. R. Peele, 516 S. Salisbury St., Raleigh, N.C., secretary-treasurer.

May 10-11—Governor's Safety-Health Conference, Lord Baltimore Hotel, Baltimore, Md. Fertilizer safety portion May 11. A. B. Pettit, Administrator of Industrial Health and Safety, Davison Chemical Co., Baltimore 3, chairman.

May 15—Western Agricultural Chemicals Assn., Spring Meeting, Hotel Clark, Los Angeles, O. O. Barnard, 2466 Kenwood Ave., San Jose, Cal., executive secretary.

May 16-18—Synthetic Organic Chemical Manufacturers Assn., Annual Outing, Skytop, Pa.

May 20-22—42nd Mid-year Meeting, Chemical Specialties Manufacturers Assn., Drake Hotel, Chicago; H. W. Hamilton, secretary, 50 E. 41st St., New York 17.

June 5-6—North Central Division, American Phytopathological Society, Kansas State College, Manhattan, Kansas.

June 10-13—National Plant Food Institute, Annual Convention, the Greenbrier, White Sulphur Springs, W. Va.

June 20-22—Northeast Branch, American Society of Agronomy, Summer Meeting, University of Maryland, College Park, Md.

June 23-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Pound-

stone, Kentucky Agricultural Experiment Station, Lexington, Ky., secretary-treasurer.

June 23-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

July 12—South Carolina Fertilizer Meeting, Tour of Edisto Experiment Station, Blackville, S.C.

July 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

July 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

Aug. 1—Kentucky Fertilizer Conference, Guignol Theatre, University of Kentucky, Lexington, Ky.

Aug. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

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and **Croplife** is the **ONLY WEEKLY NEWSPAPER** serving the industry

THAT'S WHY Croplife is changing the *READING HABITS* of the agricultural chemical industry by giving its readers—the decision-makers of the industry—the know-how, the know-what, the know-when and, most important, the know-NOW. That's why Croplife is *MUST* reading.

TO ADVERTISERS interested in the agricultural chemical industry this means, logically, that Croplife is a *MUST* medium for their advertising message. Keep your story up to date—give your customers the news and information about your products they need in the *week-to-week* operation of their business.

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